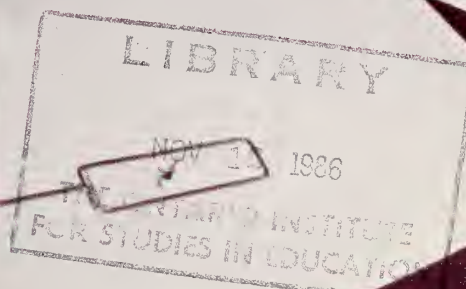


ORBIT

Comp. Stor.



**Humor in
Instruction**

**Debate:
Sex Differences
in Learning**

IDEAS
ABOUT
TEACHING
AND
LEARNING

Volume 17
Number 3
October, 1986

A publication
of the
Ontario Institute
for Studies
in Education

A Matter of Principal

Over the years, *Orbit* has received its share of plaudits. Recently the Ontario Deputy Minister of Education used an *Orbit* article to make a policy statement about women in education. Federation and school board administrators have told us that they rely on *Orbit* for an overview of the education scene. And publications across the country including the *Globe and Mail* use *Orbit* as a resource for columns and storylines. We know from feedback that principals are avid readers—the front office is after all our major mailing

address—and yet we wonder if we are making our impact on the rank and file of the system.

As this issue shows, *Orbit's* view of education is creative and diverse. No topic—including phonics—is taboo. And well-known writers mix in our pages with classroom teachers. Perhaps, then, those of you in the front office will take this as an invitation to share *Orbit* more widely with your staff. Instead of taking *Orbit* home with you, pass it on!
(H.B.)

Conferences/Events

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ORBIT 79

Whither Education? Ontario Teachers Respond	3
Uses of Humor in Instruction	Michael E. J. Orme 6
Musings on the Doormat to the Front Office	R. George Sherban 9
The View from New Zealand: Teacher Training in Canada	David Pratt 10
How Different are Male and Female Brains?	Doreen Kimura 13
Unpalatable Truths or Unexplored Potentials? A Response to Doreen Kimura	Gael M. MacPherson, Patricia G. Tobin, and Paula J. Caplan 15
Teaching Aids from the Community/Real Women Don't Do Math...	15
Arizona's Response to the National Reports on School Reform	Christa Metzger 16
From Second-Class Citizens to Third-Class Citizens? The Effect of Bill 30 on Continuing Education Students	Lorne Rachlis 18
Subversive Record-Keeping	Laura S. Weintraub 22
Russian Studies in High School	Rosemary B. Ganley 24
Self-Directed Learning Is Alive and Well at the University of Waterloo	Howard Woodhouse 26
Book Review/ <i>Responding to Individual Needs</i> by P. J. Gamlin and D. R. Fleming	Mary J. Wright 27
Profile of a School/King George Public School	

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Whither Education? Ontario Teachers Respond

"The question that concerns me as a teacher is, Whither education? I am finding it increasingly difficult to do my job to my satisfaction. Am I the only teacher who feels this way? I doubt it. In my opinion, the time has come for classroom teachers to speak out, to question the philosophy and methods that are impinging on our ability to teach, and to demand a return to a prescribed curriculum in elementary schools, to a teacher-directed curriculum

that stresses what we need to have in common, not the differences which make us individuals in human society.

It is with the hope of stirring such a debate that this paper is written. Teachers are criticized when children fail university entrance tests, yet the possibility of teaching those skills which ensure a student's success has been minimized and, in some cases, abolished."

from Ruth Weir's "Open Letter to Ontario Teachers,"
Orbit, Vol. 17, No. 1, February 1986

Dear Editor,

It is very difficult to write this letter in response to Dr. Ruth Weir's "Open Letter to Ontario Teachers" because I find the letter so incredible that it must be a ploy by the editors to evoke a reaction from the readers. If such is the case, you have succeeded in your task and there is no need to go any further.

However, in the remote chance that there is such a person as Dr. Weir, and her philosophy is as espoused, a response must be given.

The first flaw in Dr. Weir's argument is that she has assumed that one teaching style is either the salvation or the damnation of our students. Any one teaching style definitely has its strengths and weaknesses, but in my years of teaching and supervising teachers I have never found a teacher who relied on any one style exclusively. The best teachers have found the strengths in each style and have adapted them to create a style unique to themselves and their pupils. This has resulted in growth for the pupils and the teacher alike. Other teachers have similarly attempted to find what worked best for them in a given situation and have at least made the attempt to mould their teaching to the students rather than following Dr.

Weir's philosophy of moulding the child to the teaching style.

When I hear people talking about the Grey Course of Study, I often wonder if that is the same book that I started to teach with, which devoted a whole half page (and small pages at that) to the entire grade 5 science course. That was not a curriculum document but rather a list of topics to be covered, and it gave absolutely no guidance as to methodology. With our present curriculum, there has been local input as to what teachers feel should be included and suggested methodology as a guide for the hesitant teacher or a springboard for the innovative teacher.

As for Dr. Weir's insistence that phonics is the only approach to reading, surely she could not obtain a doctorate without realizing that phonics is a decoding skill and, at that, only one of several decoding skills which children require. Reading is interpreting, not simply decoding without miscues. The average child of today reads many more times the material than was ever read 30 years ago and, what is more important, he is encouraged to react to what he has read with his own unique insights and perceptions.

Dr. Weir is opposed to the child-centred program, which raises the question of why we educate students to begin with. Is it education for the sake of education or is it education of the child to enable that child

to benefit from and in turn be a benefit to society? If it is the former, then Dr. Weir is the guru we should be following, but I contend that the purpose of education is to benefit people and society. Therefore anything other than having the child as the main centre of focus will result in an inadequate outcome.

I do not deny that there is room for improvement but what is required are carefully thought out and tried methodologies which take into account the individuality of teacher and student alike. Dr. Weir's philosophy is a regressive action which implies the sorry state of the "educator," or more correctly non-educator who is proposing it.

T.E. Dunham,
Port Franks, Ontario

When I hear people refer to the "good ole days" of education I cringe. Not one to hold a grudge, such a comment makes me see red.

My student days spanned the '50s-'70s. Etched in my mind is the lack of dignity with which we, as students, were treated by the majority of teachers.

My mother taught me to read phonetically at home. I don't remember much about the curriculum of my elementary school days but I do recall that girls were good





and boys bad. I never saw (or heard of) a girl strapped. I saw a boy picked up and thrown across the room. At other times we were lifted by our ears or hair. Boys only. It goes without saying that we weren't little angels!

A number of my friends were "learning disabled," although they weren't labelled so then. Basically, they were forgotten except when strapped for not learning their times tables. Today, my students are taught with dignity, respect, given extra assistance and encouragement regardless of learning abilities. Some of my slower learners remind me of friends crucified by our teachers in the "good ole days."

I entered the teaching profession because I liked working with kids. Optimistically, perhaps idealistically, I believed that I could help improve the system. At least for those I taught. I began at the high school level and now teach a grade 4/5 class.

Abilities in my class range from grades 2-7, depending on the subject. Fortunately, I have but 23 students. I can create individual programs, within the curriculum, to help them attain their education at THEIR rate of learning. We have a half-time remedial withdrawal teacher as well as a teacher's aide and an adult supervisor. With that kind of support, a coordinated effort results in a better learning climate and better chances of success.

With some excellent curriculum studies (that we teachers helped develop) and administrative support (that allows us the freedom to implement them), I believe that the individual needs of the students are "being better met."

On the whole it works. I teach my students and they teach me. We inspire each other. A major regret. With each passing year, I get one year older. Grade 4/5 students are always 9-11. The teaching profession needs young, enthusiastic people...

Barney Moorhouse,
Bancroft, Ontario

As an historian, Ruth Weir's perspective on recent trends in education seems to be out of focus. Her understanding of the effective teaching of reading seems to have ended with Rudolph Flesch's 1955 book, *Why Johnny Can't Read*. Knowledgeable educators in the field of reading know that Flesch's work was an inadequate analysis of how children learn to read. The thesis of the book placed an inappropriate emphasis on phonics skills (decoding) instead of meaning. During the past 18 years, the work of psycholinguists has shed new light on the process and has left behind that

oft-debated question, "Which is the better method: phonics or 'look-say'?" The sight word vs phonics debate is largely over—few researchers are examining this issue. It's a matter of past history!...

To put all your "teaching eggs" in one basket is a dangerous practice. Reading diagnosticians have seen too many students whose reading skills have been arrested by the teaching and learning of inadequate reading strategies. It is not uncommon to see students who have had large "doses" of phonics attack every word as if they had never seen it before. These students have the concept that reading is "saying the words," not getting meaning from print.

Few educators today are advocating a formal, rigid curriculum that should be imposed across Ontario. The interests and experiences of children in an isolated Northern Ontario community are different from those of children in inner city Toronto. Their curricula should be different. Both, however, need solid academic skills. The Hall-Dennis Report advocated this, but within a more responsive and flexible learning environment. Unfortunately, both the "radicals" and the "conservatives" of the educational establishment misinterpreted *Living and Learning*.

Finally, I would like to address the issue of "illiteracy." I question the statement that the "illiteracy listed in 1931 was only 2.3 percent" in Ontario. I realize that this is taken from government data, but I doubt the adequacy of the statistical survey techniques used at that time. There would have been many adults, especially from rural Ontario, who had not had any schooling. Furthermore, the promotion policies of the time often left 16-year-old students discouraged, and with minimal skills in grades 5 or 6. The drop-out rate after age 14 (minimum rural school leaving age) was exceptionally high. One of the benefits of the Great Depression was that more students remained in school longer than they might previously have, simply because there were no jobs.

Another problem with the term "illiteracy" is its definition. Twenty-five years ago, a functionally illiterate person was one whose reading skills did not exceed the grade 3 level. Today, depending on the description, functional illiteracy may be defined in terms of reading skills as high as the grade 7 level. The comparison of functional illiteracy in different eras is like comparing apples and oranges. It is an unreliable and invalid practice leading to dangerous conclusions and faulty thinking. As an "historian of education" Weir should recognize this.

D.L. MacNamara,
Agincourt, Ontario

Open Letter to Dr. Weir,

To the extent that I too have been "assailed by doubts as to the soundness of present-day educational philosophy and methods," I can agree with you. However, I reach this conclusion from the exact opposite point of view from yours. While you seem to seek a return to the "good old days" when "the children sat quietly and worked," I believe that most teachers never abandoned the philosophy that by filling obedient children with facts, to be repeated at our request, we provide a sound education.

I find little of substantial argument in your letter to convince me that a return to the system you describe would be more beneficial to the children (although it would be a lot easier to teach in such a system). I would like to offer some critical analysis of your arguments.

1. I too taught in the days when Ministry inspectors visited classrooms to check that the standard curriculum was being carried out. I am not aware of a single teacher who was fired for failing too many students. In fact, some secondary school teachers I knew were proud of their high standards, and made especially sure that they failed any "weak" students so severely in the first term that they would drop the course before the final exam. One department head was so effective with this method, combined with biting sarcasm, that he never in his career had a failing student in the grade 13 departmental exam. He was considered an exemplary teacher...

If there are studies which indicate that a standard curriculum and the failing of children who did not meet the "standard" caused teachers to labor more diligently for the children in their care than teachers do at present, I should like to hear about them. The language you use is clearly biased to create this impression. In the good old days, "teachers labored to ensure that their young charges acquired a background in language and math skills." Presently in "trying to make 'the child-centred' approach work," teachers take mental health days. The fact that you include "child-centred" in quotation marks implies your distrust of the terminology itself. It would be valuable for you to define what you mean by this term.

2. I object to general statements without substantiation. "This system may not have been imaginative, but it turned out people who could read and do simple arithmetic, write a proper sentence and spell." Clearly, you imply that children then were better at all of these things. Can you offer



some data to support this theory or do we simply take your word and the newspaper headlines as documentation?

When I was chairperson of a mathematics department in the 1970s, we did substantial testing of this hypothesis by administering the CTBS tests of grade 7 students across the North York Board. Despite the fact that the students were asked questions about dry measure and other concepts not taught in our curriculum, the average student was significantly better in mathematics than in the "good old days." There was no significant difference in the subtests on spelling or reading comprehension. Similar testing of students at the junior level in 1985 showed similar results.

When I was in grade 8, I remember the large 15-year-old boys who sat in my class failing consistently, waiting for the day they could legally quit school. I remember their humiliation at being required to do the "standard" curriculum, sometimes being strapped for their failure, or for their behavior caused by frustration. I remember being too frightened to give my ideas in class unless I was absolutely certain of my answer. Those are the good old days I remember.

3. According to you, the "illiteracy" rate in Ontario has gone from 2.3 percent in 1931 to 25 percent in 1981. Since there is no record of "literacy" in the recent census, I presume you did not get the 25 percent figure from this source. Do your statistics (if indeed there are any) separate out people born and raised in Ontario from those who have come to Ontario from other provinces and countries? Do they include people whose first language is not English?

4. "Following World War II, ... was a shift in emphasis from the phonetic to the sight method of teaching reading." Is it your contention that children learn to read by the process of decoding using only phonetic clues? No good primary teacher I know uses only one method of teaching reading. Teachers use a combination of methods including language experience, phonetic analysis, and context clues. To lay all reading problems at the doorstep of the "sight method" (whatever that is) is entirely simplistic. To dismiss Frank Smith because he states (correctly) that the really fundamental constructs underlying all learning (including reading) are not "teachable" is to demonstrate a complete lack of understanding of the learning process as outlined by Piaget. This is not at all the same as saying that we should not teach children phonetic skills when they are ready for them. Readiness can be measured by a skilled teacher by structuring activities in classification, seriation, con-

servation, etc.

5. "The document *Living and Learning* ... rejected such skills as grammar, spelling and all rote learning, including math." Such statements lead one to seriously question whether the person making them has read the document. My careful reading of this document leads me to conclude that very few of the Hall-Dennis Report recommendations have in fact been instituted in classrooms in elementary schools.

Nor is it correct to imply that a child-centred philosophy requires "individual programs for 20 to 35 children." Activity-centred programs and open-ended curricula are widely available today. The work of Mary Baretta-Lorton in primary mathematics is a good example. Again, this does not imply that specific skills do not need to be taught. Rather, it means that these important skills, "so painfully acquired over thousands of years," are more effectively taught to a child who is ready for them.

6. "For how can you teach children algebra when they don't know arithmetic? And how can you have children study Shakespeare when they can't read?" Are you stating that *all* high school students fail at mathematics because of poor grounding in arithmetic? A child may be able to perform the arithmetic algorithms extremely well without understanding how to apply them. Herein lies the core of the problem. Yes, it is necessary to be able to compute! But it is also necessary to understand why you are doing each step. Such understanding is not easily gained by sitting quietly and "working." It is arrived at by active experimentation with concrete materials, and by cooperation (operation in the mental sense) with others.

Take as a specific example the process of division. It is not possible to understand division unless you realize that multiplication and division represent *one* process. Each is the reverse (inverse) of the other. Such an understanding presupposes that the child has the mental construct called reversibility. Without this construct, the child can only attempt to memorize 200 isolated division facts. Such a child knows deep inside that (s)he does not really understand what is going on, but will struggle to get the "right" answer because it pleases the teacher and parents. We send this child the clear message that it is the product we are interested in. The process is secondary, or perhaps not at all important. The correct answer *is* important. But the process of arriving at the answer is more important. For if we teach children to question, to reason, to try out hypotheses, to verify, to plan for themselves, they will always be able to gather the facts they need and to use these facts creatively.

7. "Since many children did not succeed in learning to read but were passed along anyway, teachers in the higher grades found it increasingly difficult to cover the prescribed program." So, apparently, we should go back to the good old days when we separated the wheat from the chaff. If the child does not succeed, we fail him or her. I can find no research which supports the concept of having children repeat grades. The damage to self-concept is beyond question. The fact is that these children rarely caught up and became the failures of the system. Also implicit in the statement is the belief that the child must fit the program. If (s)he doesn't fit the first time around, then (s)he repeats the program. I suggest that the program should be flexible enough to fit the child. I suggest that the teacher has the responsibility to know each child and to see to it that each child learns at his/her level. The teacher should be accountable for assessing each child's readiness level and specific skills and for providing the atmosphere and lessons to foster each child's growth. It is much easier to teach the same skills to all the children and blame the victim when some are bored and some fail.

8. With regard to the example of three primary classes, you seem to be stating that if the teacher uses a phonetic approach, it is impossible to have an activity-centred, individualized program. I can assure you that this is not the case and will gladly suggest primary programs which you could visit to illustrate the point. Furthermore, you state that the activity-centred approach leads to children who "have never learned the discipline of work." My point of view is that we should be teaching children self-discipline.

I too am not satisfied with education as it is provided by large school systems. But a move to a more prescribed curriculum, which assumes that all the children who come to me in grade 5 are somehow alike because of the number five stamped on their foreheads, is a move in precisely the wrong direction. By all means, let us be accountable to the student and the parents for the learning of each child. But let that child be excited about learning, and let the child feel that school is a warm, comfortable place in which to grow.

Allen Gorlick,
for Hillmount Public School,
Willowdale, Ontario

Editor's Note: Ruth Weir's "Open Letter" has generated more responses than any other Orbit debate. Please keep in mind, then, that the limitations of space required ruthlessness in our selection and editing of letters. Also, look out for the December issue in which Ruth Weir will be given an opportunity to respond to her critics. □



USES OF HUMOR IN INSTRUCTION

"Clowns are the true realists, super-realists, tragedians in disguise, because for them the essence of life is unexpected, the banana peel."

JOHN GRIERSON, FOUNDER OF THE NATIONAL FILM BOARD

Michael E. J. Orme

The beginnings of Canadian humor, at least in the eyes of others, reside in the simple fact of our existence. Place names such as Medicine Hat, Moose Jaw, Saskatoon, Saskatchewan, Elbow, Wawa, and Eyebrow have prompted chuckles from jaded sophisticates the world over. Moving east, locales such as Witless Bay, Funk Island, Ecum-Secum, Pugwash, and institutions like the Toronto Maple Leafs (an amusing troupe of pantomimists) have prompted outright laughter.

But humor in Canadian society surely transcends the comedic potential of mere survival. There is a rich tradition of nonsense, wit, and irony in our literature. Indeed, I would argue that the use of humor, particularly irony, has become one of the signal themes of Canadian arts and letters—a point of view semi-sanctified by the authors of the Canadian Encyclopedia. True, the encyclopedia was published in Edmonton; not Toronto. Thus, we can't take it as absolute truth. But at least it's revealed.

Examples of humor in the arts come readily to mind. Whether it be *poetry* (Earle Birney, Paul Hiebert, Dennis Lee), *drama* (David French, David Finnereo, Erika Ritter, Linda Griffiths), *the short story* (Stephen Leacock, Roch Carrier, Clarke Blaise, Morley Torgov), *the novel* (Robertson Davies, W. O. Mitchell, Margaret Atwood), *television* (SCTV, Seeing Things, David Steinberg, Rich Little), *film*

(*"Goin' Down the Road," "Paperback Hero," "My American Cousin," "Duddy Kravitz"*), *radio* (Royal Canadian Air Farce, Old Rawhide, The Norm), *news-papers* (Slinger, Gary Lautens, Sondra Gottlieb), *music* (Nancy White, The Francics), *painting* (William Kurelec), or *hockey* (Eddie Shack), we have used humor to comment on the gaps between the apparent and the real. Through humor we have been granted at least temporary relief from the weather, our national character, overheated public buildings, and other major problems too fierce to mention.

This overview of the critical role of humor in the Canadian psyche, albeit too brief, is sufficient to indicate that when the time comes to analyze humor, we are standing on ground as firm as the Canadian Shield. Given our rich heritage, it seems not only Canadian but almost patriotic to look at the uses of humor in instruction.

There are at least ten different ways in which one can use humor in instruction. These are discussed below.

Motivation

Certain characteristics of stimuli, experiences, or teaching techniques reliably cause students to pay attention. These characteristics determine selective attention. Their presence or their absence in the classroom allow us to understand why students pay attention in one situation and not in another. Once these determinants of attention are known, we can then begin to devise teaching techniques that incorporate them. Events or stimuli that are characterized by *surprise* (the unexpected), *novelty* (short-term change; incongruity), *conflict*, *complexity*, or *uncertainty* are arresting. They command attention. Whether or not one continues to pay attention to these kinds of events depends on the event's duration, its intensity, and how often it is repeated.

Now, let us consider the use of humor in

instruction. Clearly, humor is a technique that incorporates the qualities of arresting stimuli just discussed. It provides moderate changes in stimulation which are perceived as pleasant, which increase attention, and which tend to lead to exploratory behavior, curiosity, and the acquisition of knowledge. Support for this description comes from several sources. Those who have conducted physiological and biochemical research on humor have found that laughter not only allays anxiety but also stimulates both hemispheres of the brain, coordinating all the senses and producing a unique level of consciousness and high-level mode of brain processing. As Sveback (1983) notes, under these conditions the brain is essentially at its fullest capacity. This has important implications for learning. (See McGhee & Goldstein [1983] for a comprehensive review of this research.)

Building Learner Attention, Listening, and Positive Expectations

It is well known that people bring attitudes or response tendencies to various instructional environments which may interfere with learning. Quite apart from the random sprinkling of sceptics, cynics, and the disenchanting who feel they have been coerced into attending a particular program or course, we need to consider the dogmatism of experience.

Robert Leeper's (1951) thoughtful consideration of factors which have been shown to help and to hinder inventive thinking (concept formation, problem solving) is of interest here. Leeper discusses the importance of strong and continuing motivation which keeps the problem solver on task. Stimulus variation fits in neatly here.

The proper mental set may speed the solution to a problem. It is important to re-centre materials or ideas so that something formerly in the background becomes

Michael Orme was born in Kindersley, Saskatchewan, began his educational career as an English high school teacher, and has since been a professor at Stanford, Harvard, and Indiana universities. He is currently a professor in the Department of Applied Psychology at OISE and U of T.

an object of central interest. This is more easily said than done. The tendency to view things in the same way, whether this constitutes a good solution or not, is a powerful habit. Luchins referred to this mechanization of thought or problem solving as the *Einstellung* effect. Strong mechanization effects were found to occur in competitive atmospheres when mechanical methods of instruction were used and when unfavorable emotional atmospheres were established.

Bergson (1900) said that laughter has the sober, didactic purpose of correcting the human tendency to become mechanical. Laughter reaches out to correct rigidity. Because humor exploits incongruity, uncertainty, novelty, and so on, it can be used to upset fixed expectations and to encourage people to suspend usual modes of thought while alternatives are being considered.

As far as attention is concerned, it should be clear that when people know or think they know what is going to happen and how the instructor will act, their tendency is to let attention levels drop off somewhat. Relatively fast-paced, relevant humor upsets this comfy state of affairs and gets people actively listening. As soon as this happens, the instructor can reinforce desirable behavior. This is a lot more effective, and a lot more fun, than dwelling upon the evil that lurks within.

Help Instructors and Learners Break Free of Constraints

The preceding discussion has hinted at the direction to be taken here. We all are beset by constraints—conformity, inferiority, normality, rationality, naivete, egotism, sloth, and so on—that limit freedom and creativity. We adhere to them largely because, if we are to remain members of society, we have little or no choice. Humor serves to liberate us periodically from these constraints by rendering them meaningless or absurd (see Mindess, 1971). These periods of liberation are heady, iconoclastic, and stimulating. If only for a brief time, we are able to snap the bonds that bind us. These times are memorable. We take them with us, and it is no surprise to find out that the use of humor in instruction has been shown to be of greater benefit for long-term retention than for short-term learning.

The key point is that when the instructor interrupts the smooth flow of truth with droll commentary, wit, irony, or even a ham-handed attempt at humor that does not work very well, the signal goes out that it is possible, even desirable, to stop plodding along and to think about taking off into new territory. Western Canadians learn this early: Stampeding sacred cows is a dangerous, dusty, noisy business. But it invigorates one's finer sensibilities even as it offends them.

Now, far be it from me to inflame regional passions. But sometimes one has to take risks in the service of truth. Clear-eyed understanding of great paradoxes (such as the above) is instruc-

tive. How can one possibly develop an adequate theory of motivation and humor without first having lived cheek by jowl with boredom? This is one of the immeasurable benefits of a Western Canadian upbringing. You, like I, are quite right to intuitively mistrust baroque Eastern theories. *Quaecumque Vera!*¹

Intellectual Play as a Precursor to Concept Development

Consider the profession of landscape architecture for a moment. Landscape architects attempt to manipulate various elements in environments in ways that will produce functional, aesthetic, and ecologically sound harmonies between different and often conflicting sets of values.

Intellectual play and humor are important in helping to maintain an environment where these people, beyond aspiring to technical competence, feel in their bones that a design will never "sing" until creativity and artistic sensibility are brought to it.

When you visit the Landscape Architecture School at Guelph University, the first thing you notice is a grotesquely oversized pink flamingo built by the students, apparently as a tongue-in-cheek comment on the importance of aesthetic discrimination in Landscape Architecture.

One of my graduate students conducted her Ph.D. research at the school. When she brought the videotape machinery to class to begin gathering data for the study, she was greeted by the professor and all of his students, paws neatly tucked in front of them, all wearing large white paper rat ears. They were ready to be "subjects" in a psychological experiment.

Faculty, students, and staff join together to create a visually stimulating and interesting environment. Students practically live in the studios. Each person's area is personalized with art, graphics, drafting, cartoons, and the like.



But humor in Canadian society surely transcends the comedic potential of mere survival.

This kind of atmosphere is fun to be in. It conspires against mechanistic approaches to problem solving. Positive expectations are created. Associations tend to flow quickly. Humor is used to allay anxiety and conflict. Its energizing effects are directed into the drive and discipline that lead one from initially playing with an idea to more systematic and rigorous conceptual work.

Developing Group Cohesiveness, Confidence, and Identity

A repeated theme in the literature is that the humorist is seen by others as communicating approval for group norms. McGhee and Goldstein (1983) state that frequent initiators of humor are not found to be manipulative, but are skilled at behaving in a manner that is effective in helping the group reach important goals.

It should be remembered that humor avoids open hostility, even though it may at times be barbed. Thus, it helps to maintain relationships and the functioning of an organization. This is particularly evident in health care settings where it is used as a coping mechanism in difficult situations. The popular television series *M*A*S*H* illustrates this.

Effects on Learning

Broad generalizations are untenable about either the positive or negative effects of humor on learning. Humor occurs in many different forms and with unpredictable frequency in the classroom.

When people do research on humor, there is an understandable desire to control type, placement, and frequency. Thus, a good many of the studies in this area insert various forms of humor into films, televised lectures, or TV programs. Given these kinds of research conditions, it has been found that with adults in educational settings, the use of unrelated or irrelevant humor has *detrimental* effects on information acquisition. This is not the case for children. Unrelated humor fosters vigilance, attention, and superior learning. The effect is lost with the development of attention, discipline, and motivation. Finally, the initial effect reverses for adults, as the use of irrelevant humor undermines instructor-student rapport (Zillman & Bryant, 1983).

Adults do, however, respond positively to humor that is well integrated with the content. While it may not yield immediate gains in short-term learning, humor appears to enhance long-term retention, and of course, it tends to make the learning experience more enjoyable. Lastly, it is prudent to remember that humor is only one tool in a broad array of stimulus variation techniques (Orme, 1978). Strategic as opposed to indiscriminate use is considered next.

Variations in Pace and Reinforcement

It will hardly have escaped anyone's notice that following an episode of humor in the classroom, students tend to become more

responsive. They not infrequently volunteer relevant comments and questions. Humor has served to reinforce participation and involvement.

It might be useful to think about the strategic use of humor over the course of a lesson in terms of planning for variations in pace. Pace refers to the general rate of progress of a lesson. Two quite different types of pace should be considered:

(a) *Teaching Pace*—This is defined as the rate at which the teacher uses stimulus variation techniques such as movement, humor, gesture, rapid shifts in focus, shifting sensory channels, variation in voice tone and speed, and redirection of interaction from one student to another. Decisions about varying teaching pace should be based on the kind of feedback the teacher gets about student interest, involvement, and attention.

(b) *Conceptual Pace*—This is defined as the rate at which lesson content is covered, particularly those concepts which require students to engage in higher order thinking. To make decisions about conceptual pace the teacher needs evidence of student thinking: verbal evidence that students understand basic ideas; that they are able to relate one idea to another; that they are able to identify assumptions, analyze, and synthesize lesson content. Probing techniques are particularly useful in helping the teacher effectively control conceptual pace.

Clearly, the two types of pace interact. It seems to make sense to use humor and other forms of variation early on in the lesson to build up attention and motivation. Once learners are involved, bring up the conceptual pace, cover core content, and reinforce them for effort and thought. After they have worked hard for a time, reinforce them by bringing up the teaching pace again for a brief period. At these cross-over points, humor seems apt because it reinforces what went before and has energizing properties needed for what is to come. The teacher and class can summarize and confirm learning to establish a platform for the next block of learning.

Enhancing the Desire to Teach

Thus far we have been thinking largely about the effects of humor on learners. Its potential for creating an atmosphere in which the teacher really wants to teach may be even more important. A trenchant discussion of the physiological boost that laughter provides for circulation, respiration, and mental powers would probably be appropriate now. Instead, let us turn to personal experience.

What kinds of images come to mind when you think about your best teaching and the circumstances that help to bring it about? For me, there is the realization that I am learning. There are quick impressions of energy, almost daring control over content and self, speed, spontaneity, risk, and amusement. (Good God, how em-

barrassing. This sounds like a bug-eyed kid slamming a '52 Merc' into first, and taking off in a spray of dirt and gravel that shoots clear back to the municipal line. "Hey, who was that guy?" "I dunno. He was going off to teach.") The point is humor can be used by instructors to help them get themselves up to speed.

Increasing Instructor Credibility

Laughter helps to break down barriers. Charney (1983) indicates that it constitutes a choice to avoid interrupting the flow of energy. When this happens, I think the instructor and learners gain time which can be used to establish a bond so that they can discover common ground from which problems of significance can be tackled together.

While my homebase is essentially academic, I have enjoyed opportunities to work with people in businesses, trades, and professions with a view to helping them improve the quality of their instruction. Not surprisingly, my background, if not suspect, initially tends to set up barriers: Is this character (who invited him anyway?) going to be: ivory tower? too theoretical? stuffed with jargon? arrogant? a put-down artist? just an entertainer? a snake oil salesman with a phony cure? These are reasonable questions. The frankness with which they are put can be a bit surprising, but easily tempered with humor. It is useful to "cut them off at the pass" (but not at the gizzard as you may want to if you have left it too late). Address these questions with some wit and grace before they are asked.

The use of humor in these situations is not a panacea. It does not obviate the need for solid content preparation. It does, however, require the instructor to develop a lively appreciation for what others' perceptions of the situation are likely to be, what it is that they really do in their work, what constraints they work under, and how their situations differ from those that the research, literature, and one's own experience have prepared one for. One of the side benefits of this approach is that it tends to teach you a healthy respect for your own ignorance. This, in turn, provides useful raw material for humor.

Benefits for the participants appear to be that humor allows them to forestall negative judgments long enough to relax and attend to the content of the session, to gauge its relevance, to begin to consider ways in which it can be used in their situations. However, before this happens, it seems that they need an opportunity to begin to come to terms with the instructor as a person. One has to begin breaking down initial barriers while at the same time getting on with content. People want to know where you are coming from, what you do, and how you regard yourself. These kinds of questions can be handled effectively and quickly with a light touch.

The humorist mobilizes association, imagery, and verbal brilliance to sketch out

complex messages with economy. In doing so, he or she demonstrates control, energy, fluency, and timing. These factors can be seen to contribute to credibility.

Controlling Your Own Folly

There have been hints along the way that while humor may not confer an objective view of the self, it may help to point up discrepancies between the apparent and the real. In *Leviathan* Hobbes claimed that "men laugh at the follies of themselves past." It should be possible to look back upon aspects of our former and formal selves with some objective remove and with an eye to incongruities then and now. It seems to me that humor helps us to alert ourselves to some of the dangers of complacency, mechanization, self-absorption, and arrogance, and thereby leaven excess. Still, it seems a lot easier to see humorous aspects of others' follies than it does one's own. □

Note

1. The motto of the University of Alberta: "Whatsoever things are true."

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Musings on the Doormat Mat to the Front Office

R. George Sherban

Nineteen years I've been in this job. I emerged at the perfect time. Education and society, it seemed, were in a golden age. We were 100 years young and we were on the edge of the Trudeau phenomenon. I voted Liberal in my first trip to the voting booth.

I fulfilled a lifelong dream when I became a teacher. Despite my fuzzy head, I was hired quickly and began with the old town board as a purveyor of history to grade sevens. I sat at the head of a classroom where scarcely eight years before I had sat as a student. I kept looking in that room for little me with razored head and scuffed oxfords.

The first year lasted a century and was over in a flash. I can recall the second year vaguely, but the next and the next are gone. There I am in the class photos, the hair slowly getting shorter, the quality of the clothes improving, the confidence growing.

I don't know when I began to get the idea that I wanted more, that being a teacher was not enough. Maybe it was the company I was beginning to keep. The bunch of us who travelled across town to the university were cut from the same energetic fabric. Principalships, like diplomas, began to appear as reachable goals. In the library or the cafeteria or at Federation dinner tables, our talk began to revolve around what you had to do to become a principal.

Somewhere in those years of the big drive for degrees and monetary rewards, Messrs. Hall and Dennis struck a spark in me. I'm certain that I had been exposed to their message many times, but suddenly, there it was—WHAMO!!—inspiration! The individual as learner became my focus. Everything I had dutifully been studying in those extension courses began to be important to me. Everything the kids did

each day became important to me. I went through a period of learning more intense than anything I had experienced before. I still maintained a proper number of committee memberships, went to Federation meetings, and even plotted my way out a transfer program to get the experience I might need for a curriculum vitae someday. But my full attention was not fixed on how to get down the hall. I immersed myself in teaching and learning.

Meanwhile, several of the former university nighthawks quickly attained their principalships. I happily congratulated them, but not without feeling some uncertainty about myself. Another principalship or two, and my confusion grew. Finally, I decided to make a determined stab at the front office. I increased my outside involvements, joined more committees, finished my second degree. I formally entered the board's official program of leadership selection. I lived through a year of never-ending hurdles. I leapt with the best of them, but not quite high enough and failed to make the final cut.

That following summer my wife took me away with the kids. We slowly travelled across the country and back. I took time to lie back and unwind: the first pause I'd taken in years. My wife listened to my monologues, encouraging me to explore. I realized how much I loved her and our sons and our life. I realized how much I loved teaching and how I detested the wasted hours spent in meetings where the wording of pointless guidelines was too often the topic of discussion. I overcame my embarrassment at having not *made it*. I began to see the selection process as demeaning, as more concerned with social trivia than with the cultivation of sound educational leadership.

My efforts over the decade had accrued a professional reputation for me that would almost certainly have cinched a second try in the leadership race. But I returned from that summer vacation determined not to make that second try until I had made a thorough inspection of what I really wanted to achieve in this career, in this lifetime. I remained in the school where I

had been for a couple of years and then applied for my current teaching placement developing our jurisdiction's version of the provincially funded Real Math program.

And yet making a stab at a principal's chair has been on the periphery of my awareness since then. Most days, I feel certain that my interest in that place is waning. You see, I've been watching the men and one woman who have been my supervising officers. They seemed to have the power to make things happen, but so few of them seemed happy. There are some sparkling examples of admired leadership but there are also many stories of ineptitude. And how could anyone be expected to succeed against such odds? The principal is in the middle of kids, teachers, superintendents, trustees, and parents. Confronting these challenges, would I be any more able than anyone else to succeed? Maybe leaving the classroom now and assuming the challenge of leadership would be too big a risk with too little return.

One morning this week, with my fortieth birthday close at hand, I began to kid my wife about my impending mid-life crisis. I said that after I made the big four-zero I intended to make some changes. She told me she'd always worried that she'd receive a telegram one day saying that I had fulfilled my boyhood dream and had run off to sea.

"Well," I responded, "it's either that or apply for a principalship!"

She turned around and with false sobriety warned, "Whatever you do, don't you dare try to become a principal!"

We laughed. She knows as well as I do what a principalship could do to our life.

So it seems settled, doesn't it? Settled, except that this morning a board memo crossed my desk listing leadership positions and inviting applications for the latest version of the board's official leadership development and counselling program. I sat there reading down the list and reviewed what the candidates were required to do. I found myself pondering it all again. Somehow this drive to become the man in the front office has not left me. What should I do? □

R. George Sherban is a pseudonym for an elementary teacher who works for a large school board in southern Ontario.



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The View from New Zealand: Teacher Training in Canada

David Pratt

Incomes are low in New Zealand, but the quality of life is high. Almost everyone lives within 30 minutes of the mountains and 30 minutes of the beach. The climate is gentle all year. The country is a nuclear-free zone, sparsely settled by 3½ million people and 70 million sheep. Sport is the national religion. Sports injuries, which are covered by workmen's compensation, are more frequent than traffic injuries. Libraries, museums, theatres, and art galleries are numerous and well-supported. Cities are filled with playing fields and rose gardens.

For 50 years, New Zealand has maintained a tenacious commitment to social welfare and to education. There is almost unanimous support for the schools. All university students receive free tuition plus a living allowance. Teachers can move easily within the country, with paid moving costs and portable seniority. Elementary schools are warm and friendly places; secondary schools differ from those in Canada most obviously in the prevalence of bicycles and school uniforms. Academic standards are rigorous. Fifty percent is an average mark, and the grading system on the national school certificate examinations is deliberately structured to fail half the candidates. In addition to academic curricula, elementary schools routinely teach swimming, first aid, and CPR. Secondary schools offer such options as riding, canoeing, flying, and skydiving.

One of my purposes in paying an extended visit to New Zealand was to study the preparation of teachers. I left Canada at a time when major attacks were being directed at teacher education in both



Part of the confidence course at a Middle School Camp.

Canada and the United States. The most serious criticisms were that teacher education lacked quality control and that it did not provide adequate training in specific professional skills. In general, I felt that these criticisms were justified. The primary difference in teacher education between the two countries is that in New Zealand teachers are prepared in teacher colleges separate from the universities. In visits to several of these colleges, I observed professional preparation programs in many respects superior to those in this country. What struck me most forcibly was the high degree of professional commitment apparent in the New Zealand teacher colleges. Three aspects of their program illustrate this.

The Academic Year

In Canada, faculties of education tend to follow a conventional university pattern. The "one year" consecutive Bachelor of Education program in Ontario, for example, is actually only 7 months, consisting of approximately 20 weeks of lectures and 8 weeks of practice teaching. The New Zealand teacher colleges operate on a year of approximately 36 weeks, including

at least 12 weeks of practice teaching. Faculty teaching loads also differ. Teaching loads in Canadian faculties rarely exceed 200 hours a year. In the New Zealand colleges, where the priority is teaching rather than research, faculty teach a total of over 350 hours a year. As the faculty/student ratios are about the same in both countries, New Zealand colleges can offer a richer and more diversified program to smaller classes than is possible in Canada.

Student Teaching

In New Zealand, each student teacher is visited by a faculty instructor at least four or five times a year. This work is shared equally by all faculty. On one occasion, the principal of the college I was visiting excused himself early from lunch in order to visit a teacher on his list at a nearby school. But in Canadian faculties, the supervision of practice teaching is usually a vexed question. Driving from school to school on roads that always seem to be icy; drinking bitter coffee in staff rooms; finding that the student whose teaching you came to observe is away sick or on a field trip—these things require a degree of commitment difficult to sustain when it is valued less than sitting warm and dry at your word processor adding to your publication record. Inevitably, the load falls disproportionately on those faculty who are more committed to the improvement of practice than to their own career development as academics.

Admissions

The process of admissions contrasts markedly between the two countries. Canadian faculties rarely conduct interviews for admission, basing admissions primarily on academic grades. In this respect, they are out of step with professional schools such as medicine and physiotherapy which almost invariably interview for admission. In New Zealand, a college will typically interview 500 applicants for 100 places, giving each applicant a

Dr. David Pratt, who is a Professor of Education at Queen's University, spent six months on academic leave in New Zealand in 1985. He has published three books on education and numerous articles in international research journals.

20-minute interview with a panel of three senior educators. It is a fact that the predictive value of admission interviews is controversial. We could put it this way: New Zealand educators put the same energy into interviewing prospective students as Canadian academics who "do not believe in the interview" put into interviewing prospective colleagues.

Although I could not obtain exact figures, washout and failure rates in teacher education programs appeared to be higher in New Zealand, despite their more stringent selection. In Canadian faculties, qualifications are earned by accumulating credits, and failure in any component is remedied by repeating or substituting a course. There is much truth in the popular belief that it is impossible to fail in a teacher education program. We have low drop-out rates, and I estimate that the actual number of students who are actively failed out of consecutive B.Ed. programs in Ontario is less than 1 percent.

A Union of Academic and Professional Excellence

The separation of teacher preparation from the universities in New Zealand also has some benefits for faculty who work in the university departments of education, enabling them to concentrate fully on research and graduate teaching. This may account in part for the high quality of educational research in New Zealand. In Canada, on the other hand, the two functions live in uneasy coexistence. The scholars often regard supervision and training as a distraction from more serious work. The professionals see their training role as taking second place to research.

Such ideological differences reflect the fact that the dominant ethos of the modern university is knowledge generation. The pursuit and publication of new knowledge governs the culture and reward system of universities. Universities are still funded primarily on a per-student basis, as if teaching were their major function; but, in fact, while the provision of teaching is taken seriously, the quality of teaching is very much a minority interest among administrators and faculty. Over the past ten years, "master teachers," whose stock-in-trade was expertise in classroom teaching, have become an endangered species in Canadian faculties of education. In the 1970s, many of them diverted their energies into research, doctoral study, or publication. Those who resigned or retired were often replaced by less expensive young Ph.D.s with little teaching experience. Jacques Barzun's words of 20 years ago are generally true of Canadian universities today: "Teaching is not a lost art, but the regard for it is a lost tradition."

Donald Schön, a distinguished researcher of professional practice, recently stated the issue even more bluntly: "I have become convinced that universities are not devoted to the production and distribution of fundamental knowledge in general. They

are institutions committed, for the most part, to a . . . view of knowledge that fosters selective inattention to practical competence and professional artistry" (*The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books, 1983, p. vii).

This is not to say that the days of the teacher colleges in Canada were a golden age. Many of the colleges were quite dreadful. Teacher preparation is now in the universities in Canada for good, in both senses. But its incorporation has not fulfilled its early promise of a union of academic and professional excellence. This remains a goal both possible and worth pursuing.

I have a fantasy that government might exercise some leadership in this area. But the role of government in inservice teacher education shows this fantasy to be the triumph of hope over experience. Over the past decade, the Ontario government has repeatedly rejected carefully developed and widely supported proposals from Ontario universities for inservice certificate programs aimed at updating and enhancing the professional knowledge and skills of teachers in such areas as curriculum planning, instructional design, and educational measurement. At the same time, the Ontario Council on Graduate Studies has taken steps to ensure that all Master of Education degrees conform to a research model, rather than a model of advanced professional education. The promising sign on the horizon is that this leadership vacuum is being filled by initiatives from teachers' organizations, sometimes in collaboration with universities. Project Teach and the Ontario Public School Teachers Federation (OPSTF) Leadership Academy are two distinguished examples.

But the problem of deprofessionalization of preservice teacher education remains unresolved. It does not seem impossible to develop faculties and programs which exclude neither theory nor practice but which focus on professional praxis—reflective and theoretically sound practice. One approach to this might be a pattern of differential staffing in the faculties of education similar to the model of clinical and academic staff in medical schools. In such institutions, faculty would be encouraged to concentrate either on research, or on professional practice, depending on their proclivities and expertise, without jeopardizing their status or career development. Such a model rejects a one-dimensional university ethos in favor of a pluralistic professional ethic.

The placing of preservice teacher education in the universities is periodically debated in New Zealand. At present, the authorities there are in no hurry to move in that direction, based in part on their observation of the consequences in other countries. The challenge for Canada is to develop faculties of education in the universities which will be centres of both academic and professional excellence. □



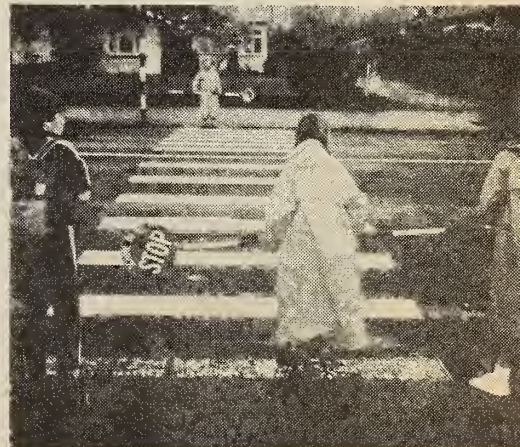
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How Different Are Male and Female Brains?

Doreen Kimura

I would like to respond to the article by Patricia Tobin, Gael MacPherson, and Paula Caplan in the April issue of *Orbit* (Vol. 17, No. 2, 1986) on differences between male and female brains. The points made in that article were: (1) that differences in intellectual ability between males and females are not reliably obtained, and when found are small and can probably be attributed to differences in socialization; (2) that findings on sex differences in brain organization are questionable because of methodological problems, specifically, that one cannot generalize from a damaged brain to a normal one; and (3) that consequently there is no basis from research on sex differences for instructing males and females differently in the educational setting.

I would like, first, to make a distinction which the authors fail to make, between research on sex differences in abilities and research on sex differences in brain organization. Research on gender-related cognitive function has a long history and a large literature; and while it is implicit that a difference between males and females on any intellectual measure must mean some kind of difference in the brain, this could take many forms. For example, a difference in strategy or approach to a problem could, in theory, be compatible with an essentially similar brain organization in males and females, *except* for a mechanism which tends to select one neural system in females and another in males. The point is that sex differences in ability are not *ipso facto* equivalent to sex differences in brain organization. It is not accurate to claim that people conduct research only on certain abilities and then simplistically "draw conclusions about the brain."

Let us consider the criticisms levelled against the literature on sex differences in various kinds of abilities. The findings generally show that males perform better than females on certain spatial tasks, especially those involving imaginal rotation and disembedding, and on mathematical reasoning. Females, on the average, perform better at verbal fluency tasks, and

also at some fine motor tasks and on tests of perceptual speed. It is true that not all studies find a significant difference between the sexes, but the general trends are the same across studies—that is, there are typically no reversals. Harshman (1983) has argued, persuasively, that many studies failing to confirm the role of individual differences (of which sex differences form one category) have had small sample sizes. He and his coworkers have also shown that individual differences such as sex, hand preference, and intellectual level interact in certain predictable ways,

anomalous prenatal hormonal environments.

Information on brain organization has come from two main sources—the study of persons with central nervous system damage and the study of normal persons via perceptual asymmetry techniques. I would like to take strong issue with the suggestion that one cannot generalize from studies on brain damage to the normal brain. Of course, an injured brain does not function in the same way as a normal brain. That is precisely why its study is of interest. By carefully noting and comparing

The findings generally show that males perform better than females on certain spatial tasks, especially those involving imaginal rotation and disembedding, and on mathematical reasoning. Females, on the average, perform better at verbal fluency tasks, and also at some fine motor tasks and on tests of perceptual speed.

so that results may vary across different samples of subjects, related to factors other than sex.

The better performance by males on mathematical reasoning has been demonstrated repeatedly on large samples by Benbow (1984). Her data suggest that it is especially the top scorers (the top 1 to 2 percent) who are overwhelmingly male. I would agree that there is enormous overlap between males and females on most cognitive tests, including tests of mathematical reasoning, but some of the mean differences on spatial tasks approach 20 percent, which is substantial. Even a difference of 5–10 percent will have a measurable impact on which occupations or activities males and females, on average, will excel at. (This is *not* an argument for occupational assignment on the basis of sex, since many tests are available to act as valid screening devices.) Recent evidence suggests that some of the sex difference in spatial abilities may be related to the levels of circulating sex hormones, either estrogens or androgens. This by no means rules out socialization as a contributing factor, but it does suggest a strong intrinsic biological contribution. The same is probably true for the tendency for males to be more active than females, since "tomboyishness" in females has been found to be higher in females with

the behavioral effects of damage in different regions of the brain (different neural systems), one can make some inferences about what these systems do in the undamaged brain. For example, Tobin et al.'s assumption that the left half of the brain is "primarily responsible for language functioning" is based precisely on that kind of inference, that is, on the fact that damage to the left hemisphere frequently results in communicative disorders, while damage to the right hemisphere rarely does so. This kind of research is not easy to do because one must wait for selective damage to occur naturally; but if carefully done, it can, and has, contributed an enormous amount of useful information on the neural substrates for a wide range of perceptual, spatial, language, memory, and motor functions. To suggest otherwise is to reject a huge body of well-founded research on human brain organization. The study of individual differences, including sex differences, in brain organization is simply a logical extension of this method.

Moreover, findings derived from patients with brain damage have been confirmed on normal subjects. We can get an indication of the degree to which certain functions are lateralized to a brain hemisphere in normal people by using special perceptual techniques. These techniques depend on the fact that input into one-half of the body

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Unpalatable

Gael M. MacPherson, Patricia G. Tobin, and Paula J. Caplan

Any discussion that involves the research on sex-related differences, particularly possible cognitive ones, is bound to generate controversy. This is not surprising, since many researchers have devoted vast amounts of time and energy to searching for these cognitive differences. In replying to our article, "Should Female and Male Brains be Differently Instructed?", Kimura critically re-examines a number of important issues that bear on how this "scientific" research is interpreted and, as a result, how educational methods can be influenced. Although Kimura shares our advocacy of an extremely cautious approach to translation of brain research into teaching strategies or educational programs, she disagrees with us on several other points.

First, Kimura states that it is not accurate to claim "that people conduct research only on certain abilities and then simplistically" draw conclusions about the brain, and she points out that sex differences in ability "are not *ipso facto* equivalent to sex differences in brain organization." It is true that observable sex differences in task performance cannot usually be traced back to specific neural systems. Unfortunately, many people seem unaware of this, and they recommend educational programs allegedly based on information about the brain. Furthermore, those who conduct the research are rarely the ones who package the educational programs. In good faith, other psychologists and educators read published research and attempt to incorporate what they believe are scientific findings into programs that will better enable them to teach children.

Indeed, the tendency for many people to accept research reports uncritically was what led us to stress the importance of

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very similar, how could one best achieve this? The apparently reasonable assumption that co-educational training is the best method may be false. It is just as reasonable to think that women who attend all-girls' schools might become better educated and more independent because

What do we want to do in training young men and women? Do we want them to follow their individual bent to the fullest, or do we want them to have exposure to a wide range of subjects, so that they will not close out their options prematurely?

they are allowed to develop without competing with, or being overshadowed by, more aggressive, dominant male peers.

Finally, I agree that it is desirable for children to be taught "not to accept unquestioningly" the reports of researchers. Given the self-correcting nature of research, however, such training in scepticism might better be directed at many other sources of information—religion, history books, teachers, etc. To direct criticism at only one segment of knowledge, and a segment which is already self-critical, is surely inappropriate. Balanced criticism of research on sex differences demands a sceptical sifting of the information, yes, but it also requires a willingness to accept what might be unpalatable facts.

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(ear, visual field) is first transmitted to the opposite cerebral hemisphere for processing. When we compare perception of material between left and right ears or left and right fields in normal people, we find that words are perceived better if they are presented to the right side (going to the left half of the brain) than if presented to the left side (going to the right half of the brain). This is what one would expect if speech/verbal functions depend more on the left hemisphere, as the brain damage studies would suggest. The converse is true for certain nonverbal material, again confirming findings from brain-damaged subjects.

When sex differences appear, either in the effects of damage to different parts of the brain, or in perceptual asymmetries in normals, it is reasonable and appropriate to conclude that these represent some kind of sex difference in brain organization. I am not aware of any irreconcilable discrepancies within this literature. On the contrary, we have converging evidence from a number of sources that sex differences in brain organization do exist; that they are probably hormonally conditioned in intrauterine life; and that they relate to some of the ways in which males and females differ cognitively.

Having said all that, however, I am in basic agreement with the suggestion that application of these findings to educational strategies is premature. We are only beginning to find out the specific ways in which men's and women's brains differ, but even if we knew a great deal more, we would have some major questions to address before planning educational programs. One question that cannot be answered simply by research is, What do

We have converging evidence from a number of sources that sex differences in brain organization do exist; that they are probably hormonally conditioned in intrauterine life; and that they relate to some of the ways in which males and females differ cognitively.

we want to do in training young men and women? Do we want them to follow their individual bent to the fullest, or do we want them to have exposure to a wide range of subjects, so that they will not close out their options prematurely? Another major question is potentially answerable by educational research, but so far as I know has not been broached—namely, even if one wanted men's and women's training and opportunity to be

Truths or Unexplored Potentials?

A RESPONSE TO DOREEN KIMURA

teaching both children and adults to evaluate the reports of researchers critically. This would keep them from falling prey to the belief that because research is published in a journal and looks impressive it represents the truth. Kimura agrees that critical thinking skills should be taught but then goes on to say that because research is "self-correcting" and "self-critical," criticism should instead be directed at "religion, history books, teachers (sic), etc." But it is not true that research is usually self-correcting. Ideally, yes; in practice, no. In fact, it is precisely because of the belief that scientific research is "self-correcting" that we accept its claims uncritically and readily translate them into educational strategies. As British psychologist Liam Hudson points out in *The Cult of the Fact*, scientific research has become inappropriately elevated to the status of truth. Scientific research should properly be included with "religion, history books, teachers (sic), etc." because it generally does not represent "truth," but

rather it represents hypothesis testing.

Even if research were usually self-correcting and self-critical, few people reading the outcome of a particular study take the trouble to do a careful review of all the other studies that have been carried out in the area. And, if one does do a careful literature review, one may still be no closer to discovering the truth about sex-related cognitive differences. There are several reasons for this. First, studies that show *no* sex difference are rarely published, and second, researchers discuss the sex differences they do find in a way that implies that these differences are large, irreversible, and brain-based. In fact, the magnitude of observed sex differences is often so small as to be negligible for all practical purposes—including the design of sex-differential methods of teaching. In addition, few researchers have paid attention to the demonstrated ease with which sex differences can disappear with training or practice. If equal attention were given to such studies and if sex differences con-

tinued to be consistently found, then we could agree with Kimura's belief in "a strong intrinsic biological contribution." However, it would still be questionable as to what extent these differences affect an individual's functioning.

Kimura suggests that it requires willingness to accept what may be "unpalatable facts." It is informative to consider that many researchers feel free to exhort others to accept unpalatable and shakily founded or unfounded claims about sex-related cognitive differences although they do not feel free to do so about race-related differences. Clearly, there is a socially approved mania for finding sex differences rather than focussing on similarities between the sexes. Indeed, the study of sex differences has reached the level of an obsession with translating the findings of small differences into sweeping statements regarding the sexes. It seems both inappropriate and harmful to rush from there to sex-differential teaching practices and programs. □

Teaching Aids from the Community

Real Women Don't Do Math...

OR DO THEY?

That is the question. The answer is an unequivocal yes according to the video of the same name. This video and its sister "Physics . . . A World of Opportunity" have been produced by the WISH (Women in Science Hopefully) program in cooperation with the Department of Instructional Aid Resources, both at York University.

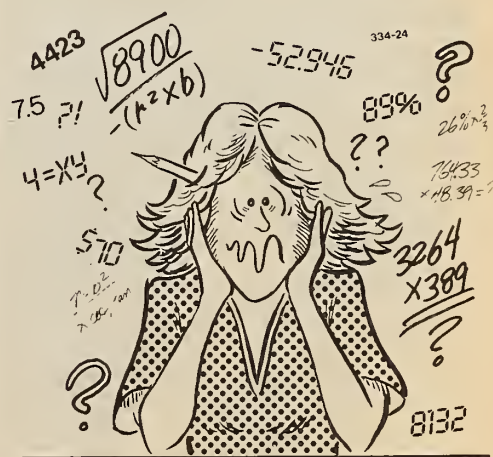
The ten-minute, full color videos are mini-documentaries of two three-day colloquiums sponsored by WISH and held at York University. Approximately 30 grade 9 and 10 girls lived on campus for three days and were immersed in the fascinating worlds of mathematics and physics.

Participants in the physics colloquium met with women from industry, government, and universities who described the career possibilities in the physics field. Laboratory experiments allowed the students to experience for themselves just

how interesting physics can be, from producing spider webs to laser holograms.

The award-winning mathematics video took a similar approach, focussing on the math colloquium. But the emphasis was not just on math as a discrete subject but also as the basis of a diverse range of fields (architecture, psychology, computer technology, speech therapy, nursing, commercial diving, and so on). The career opportunities are unlimited, as speakers at the colloquium attested. They stressed the importance of continuing with mathematics through high school as one of the best ways of keeping career options open.

The highly watchable videos showcase the most interesting aspects of the colloquiums (and indeed, of physics and mathematics themselves). The videos are available from York University at the cost price of \$29.95 for 3/4" tape and \$24.95 for



either 1/2" beta or VHS. To order, contact York University, Department of Instructional Aid Resources, 113 Stedman, 4700 Keele St., North York, Ontario M3J 1P3. (416) 667-3411. (D.H.) □

ARIZONA'S RESPONSE TO THE NATIONAL REPORTS ON SCHOOL REFORM

Christa Metzger

In the United States, 1983 will certainly be remembered as "the year of the reports." In that year, the Department of Education established the National Commission on Excellence and sponsored a large-scale study of education published in a document entitled *A Nation at Risk - The Imperative for Educational Reform*. Around this same period, no less than 30 major national reports about education were published.¹ The biwords for these reports have become "Excellence" and "Reform." Most of them focus on increasing standards and requirements for students and educators in order to raise the "quality" of education.

It should be noted that many of the reports left unresolved certain philosophical issues surrounding the relationship between "Excellence" and "Equity." *A Nation at Risk*, for example, almost completely ignored vocational education and did little to address the needs of the non-college bound student. Thus it was no surprise that during the subsequent two years (1984-85), other reports were published which addressed this perceived weakness.² But what has been the response to, and the effect of, these many reports on educational reform?

Without a doubt, the most significant impact of the national reports has been the increased focus on education by the general public and the education community. Most states, including Arizona, have published one or more of their own reports of findings and recommendations on

educational excellence. In many states, there has been a competition for the spotlight on educational reform among legislators' and governors' offices, state departments, and state boards of education. In Arizona, for example, Governor Babbitt established a Committee on Quality Education which published its findings in a report entitled *Education in Arizona: Popular Concerns, Unpopular Choices*. The Arizona State Department of Education also developed documents showing what Arizona was doing about excellence in education. Professional organizations, both at national and state levels, addressed some of the recommendations with their own opinions and responses.

Not only the education community but also the general public has responded with increased attention to education. Media coverage of the reports has resulted in creating greater public awareness. Education has become an accepted platform for political campaigns. The business community has also become more involved, creating in Arizona, for example, a consortium of companies and school districts called "Partners in Excellence" and the "Arizona Education Foundation" which channels private funds into the public school systems.

Several local school districts in Arizona have formed their own committees or task

forces to study and develop recommendations for action.³ I conducted a survey of district superintendents in Arizona to ascertain the degree and type of response to the reports. Most smaller districts reported "some" response whereas larger districts (pupil size 10,000 or greater) reported "a lot" of activity in response to the Excellence Movement. The most frequently mentioned types of responses, in districts of all sizes, were the following: changes in standards and expectations for students, more inservice for teachers and administrators, higher teacher salaries, greater community involvement, and greater awareness of the importance of education in the community.

What changes in policies, procedures, and practices have occurred as a result of the increased awareness and activity brought about by the reports? To assess this question for Arizona, let's use the five categories of the National Excellence Commission's Report *Nation at Risk*:

1

Content—A committee of the Arizona State Board of Education is currently completing its recommendations for new high school graduation requirements. There have been some concerns surrounding these recommendations since they would add more college preparatory types of courses to the curriculum. This, in the opinion of some Arizona educators, would further increase an already serious drop-out problem among Arizona high school students (the drop-out rate in the Phoenix Union High School District, for example, has increased to 19.8 percent in 1984-85 from about 12 percent in 1975-76). The State Department of Education is also in the process of a thorough re-evaluation of the vocational education curriculum. The new focus will be on providing training for students in high demand occupations with a curriculum based on industry-validated competencies. For elementary schools, the State Department has refined and upgraded the already existing essential skills lists in all state required subjects. The Department has recently added a new division entitled "School Improvement Unit" to assist districts in curricular areas and staff development. At the local district level, changes in content are being made primarily in response to the new state requirements.

2

Time—In response to recommendations by the National Commission on Excellence, some initial attempts were made to increase the school day and year. However, there has been resistance to this at both state and district levels, critics stating that merely adding time would not guarantee better quality and that adequate documentation was needed about the effective use of the time already available.



Dr. Christa Metzger is Superintendent of the Tolleson Elementary School Board in Tolleson, Arizona.

3

Standards and Expectations—All students in Arizona are currently tested each year in reading, math, and grammar using the Iowa Test of Basic Skills. This practice was in place prior to the reports of 1983. The Arizona State Board recently upgraded its promotion and graduation standards and has tied these into the newly developed essential skills requirements. The state has established skills at 3rd, 8th, and 12th grade levels as benchmarks for promotion or graduation. These skills must be mastered for graduation from 8th and 12th grade, while the 3rd grade skills are only recommended and not mandated, at this time. School districts, in addition to implementing the new state mandates, are responding by raising their own expectations both in academic areas and in behavior and attendance requirements. Along with such efforts, there has been a concomitant interest, particularly from inner city school districts, to address drop-out prevention and retrieval programs. The State Legislature has allocated additional funds for districts to establish programs for children with academic deficiencies in grades K–3. In the area of standards for student behavior, a state-wide task force composed of citizens and educators has recently been established to produce a resource guide on discipline techniques and resources for schools to use.

4

Teaching—Last year, the State Legislature funded proposals for districts to develop demonstration projects in career ladders designed to attract, retain, and motivate teachers. Raising teacher salaries has received much attention in Arizona. There will be a referendum on the general elections ballot this November regarding an amendment to the Arizona Constitution which would raise the aggregate spending limit for schools by ten percent. If passed, this would allow additional funds for increasing teacher salaries, pending legislative action to appropriate such funds. The State Board is considering a proposal to establish a minimum teacher salary in Arizona of \$19,000. Many districts made raising teacher salaries a budget priority last year; a few are experimenting with merit pay or career ladder plans. Perhaps in anticipation of a coming teacher shortage, many districts have focussed on raising beginning teacher salaries. The State Department also initiated several reforms in certification requirements for teachers. These include establishment of a teacher residency program to assist new teachers and more stringent teacher competency testing requirements, using the Arizona Teacher Proficiency Examination (the ATPE had already been implemented prior to 1983).

A number of efforts are under way to

follow up on the National Excellence Commission's recommendation to "make teaching a more rewarding and respected profession." For example, through the involvement of the business community, the teacher selected as "Arizona Teacher of the Year" now receives a \$5,000 stipend. Smaller cash awards are given to the runners-up. Many districts have strengthened their teacher recognition programs and their public relations efforts to focus on "what's good about teaching." There has been a definite increase in teacher and administrator inservice training and staff development programs both at state and district levels. Teacher training program requirements at the state universities are being reviewed. Their programs must now be approved by the State Board of Education. Approval is based on demonstration of competencies achieved in teaching and classroom management skills rather than merely passing a course. One of the state's universities, The Northern Arizona University, has recently eliminated its College of Education and established a "Center for Excellence." The Center for Excellence uses an interdisciplinary, field-based approach to teacher education.

5

Leadership and Fiscal Support—Arizona's Principal's Academy for inservice training of principals was initiated last year through the State Department of Education. The Governor's Office also has expressed strong support of the Principal's Academy. The Arizona School Administrators Association and the Arizona School Boards Association have increased their inservice activities for administrators and school board members. Last year, Arizona voters approved more budget override elections than had been the case during the prior several years. As stated already, there have been many efforts to involve business and industry as "partners" in education—for financial support, in personnel exchange programs, and for mutually beneficial utilization of resources. More citizens have been included on various task forces and study groups. To encourage leadership and excellence, Arizona has also recently initiated the Elementary and Secondary School Recognition Program which provides honors to the top ten elementary and the top ten secondary schools in the state.

Summary and Conclusion

The major benefit of the reports has been to create a strong focus on education, especially on public schools, leading to a flurry of response activities by states and, to some degree, by local school districts. It should be noted that many of the changes which are occurring now as a result of these studies were already under way in districts and states. The reports provided additional impetus to expedite such reforms and to focus on high priority needs.

In Arizona, most of the responses to the reports have been initiated at the state level through the State Legislature, State Board of Education, State Department of Education, and the Governor's Office. Local school districts are implementing state-mandated changes; and larger size districts, in particular, are initiating some changes in their own policies and procedures.

The important question still to be answered is whether these changes and activities will result in *excellence*, *reform*, and *better quality* education for students. Once the "paper changes" are in place, it will take enthusiastic, committed, and skilled staff to bring them about. I share the concerns of the Arizona State Board of Education President Mr. Eddie Basha who stated in a recent address that the "prescriptive" nature of the recommendations may result only in "top-down" mandated correcting of weaknesses without bringing about the systemic, system-wide, philosophically based changes involved in "the way we do business." The reports have given us a beginning. They certainly have become a catalyst causing educators and citizens to work together in a united effort to achieve quality education—excellence and equity—for our children.

Reference Notes

1. Some of the best-known reports of this period were: *Action for Excellence* (Education Commission of the States Task Force on Education for Economic Growth), *Academic Preparation for College* (College Entrance Examination Board Educational Equality Project), *Making the Grade* (Report of the Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy), *Education and Economic Progress: Toward a National Education Policy* (The Carnegie Corporation), *A Celebration of Teaching: High Schools in the 1980's* (National Association of Secondary School Principals and the Commission of Education Issues of the National Association of Independent Schools), and *High School: A Report on American Secondary Education* (The Carnegie Foundation for the Advancement of Teaching).
2. Two examples of this second wave of reports are: *Barriers to Excellence: Our Children at Risk* (National Coalition of Advocates for Students: Board of Inquiry Project, 1985) and *Make Something Happen: Hispanic and Urban High School Program* (National Commission on Secondary Schooling for Hispanics: Hispanic Policy Development Project, 1984).
3. See Christa Metzger, "Gummibears Instead of Sour Grapes: A Positive Response to the National Reports on School Reform," *Phi Delta Kappan*, November 1984, pp. 177–180.
4. Eddie Basha gave this speech, "Nation At Risk—Response," before the Arizona Education Association Critical Issues Conference, March 1985.

From Second-Class Citizens to Third-Class Citizens?

THE EFFECT OF BILL 30 ON CONTINUING EDUCATION STUDENTS IN ONTARIO

Lorne Rachlis

Bill 30, *An Act to Amend the Education Act*, contains no reference to adult education or to continuing education, and in some respects this is not at all surprising. First, the *Education Act* itself makes no mention of continuing education, and it makes no more than passing reference to adult education. And second, the major intent of Bill 30 is to extend public funding to the senior grades of the Roman Catholic separate school system, and it therefore occupies itself with entitlement to grants, transfer of resources and staff, the phasing-in process, terms for separate school electors on public boards, pupil attendance, and so on. Attention has focussed on the formal education of children through the initial years of schooling and their right to this being a Catholic education.

For adult and continuing education, the implications of Bill 30 begin with this proposed change to the *Education Act*: "A separate school board may elect to perform the duties of a secondary board for the area of jurisdiction of the board." Statements from many separate school boards indicat-

ing that they intend to become full-service boards suggest that the creation or expansion of adult and other continuing education programs by these boards will be inevitable if not imminent.

There are a number of issues relating to adult and continuing education which must be addressed: issues which have become concerns because of the lack of attention of legislators, and of almost everyone else for that matter, to the impact of Bill 30 on continuing education. These are discussed below.

An Adult's Right to Education

On the first concern, the question of an adult's right to education, there *is no* clear right, and I believe there should and must be. According to the *Education Act*, any adult (up to age 21) is entitled to free elementary education and to seven years of free secondary education. These are not clear statements, nor are they adequate. The education referred to is not education designed or intended for adults. Under current legislation and regulations, continuing education is an optional activity for school boards, with a disadvantaged grant formula.

Ottawa Board of Education trustee Jane Dobell commented in her presentation (September 1985) to the Provincial Legislature's Social Development Committee examining Bill 30:

The Ministry has done little or nothing to encourage the establishment or continuation of adult education programs in the last 10 years. . . . The result is that many school boards, individual trustees and school administrators wrongly believe that it is a privilege . . . for adults to study in their schools. . . . Such a program is considered to be an expensive . . . and marginal activity by most school trustees and administrators who are generally ill-informed about the educational needs of adults.

She went on to say that these,

attitudes explain why the usual conditions associated with adult programs are:

— classes in leftover substandard space, with

An adult environment is almost always the choice for adults returning to school.

worn-out and outdated equipment
—classes scheduled in locations and at times to suit the school board and not the adult
—teachers unaccustomed or untrained to teach the older age group
—inadequate educational services (e.g., counselling, library, diagnosis of learning disabilities, remedial teaching).

Educationally speaking, adults are second-class citizens in Ontario today. Bill 30 threatens to make adults third-class citizens.

Bargaining Rights

The second concern has to do with the continuing education teacher's bargaining rights. The Ontario Labour Relations Board's consistent decision in this matter has been that teachers can be employed only on standard—probationary and permanent—contracts. Unless this is overturned, or made irrelevant by new legislation, the day may be coming, and sooner than we think, when all school boards will be negotiating collective agreements with their night school and summer school credit course teachers. Can teachers of adult basic education (literacy) and English as a second language be far behind?

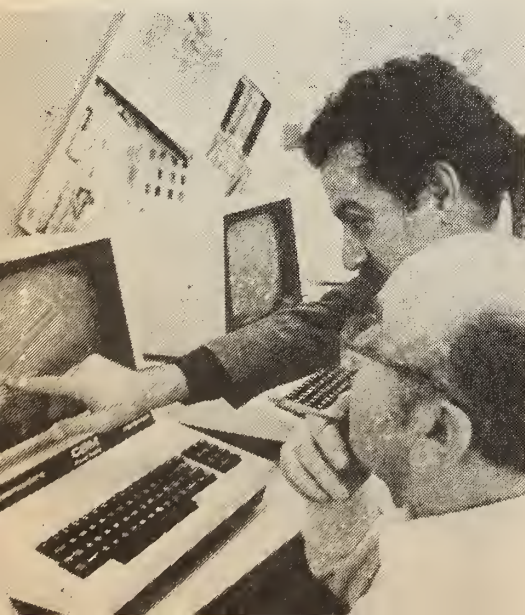
Market Fragmentation

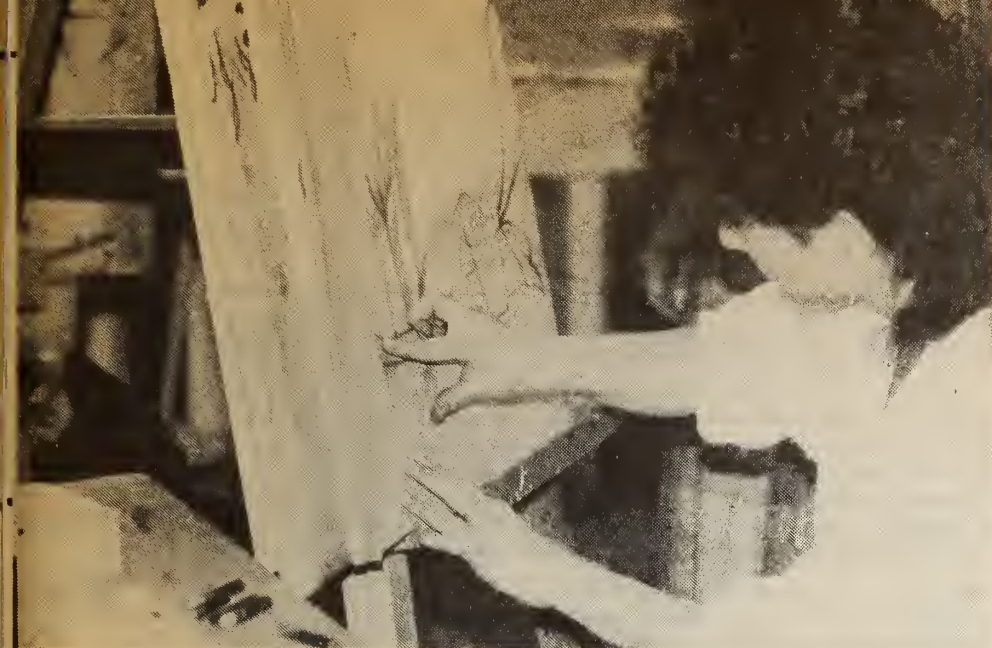
A third point is market fragmentation. At the present time, the Ottawa Board of Education operates through continuing education an English language adult day school which enrolls 800 students each semester and a French language adult day school which enrolls 300. Adults are also welcome to enrol in any regular secondary school. Given this choice, 98 percent of adults taking daytime credit courses in Ottawa choose the adult schools. An adult environment is almost always the format of choice for adults returning to school.

With these numbers, viable programs with a reasonable selection of academic courses, plus adult-oriented support services, are possible. In the Ottawa-Carleton region, these two schools are the major centres for adults to upgrade or complete their basic and secondary education.

If the two separate school boards in the region begin to compete, and syphon off some of these students, then the range of programs and the services available to

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This model can be used to ensure the availability of any specialized program for which there is a small student population, including special education, technical or commercial education, and performing and visual arts.

adults will diminish as the market fragments. This applies equally to our evening schools and to other classes for adults.

For example, if there are 25 adults who wish to study calculus (in English) during the day in the Ottawa area, they now can take this course at our adult day school. If the four area school boards were each to offer daytime calculus for adults, groups of four, or five, or six adults might register with each board, with the result that no calculus course would be held. As another example, an adult day school with 800 students can afford the luxury of one or two full-time counsellors. Four competing adult day schools of 200 students might each be allowed, at best, a part-time counsellor whose full-time concern and expertise would not likely be in adult education.

No individual school district has the population base to support competing continuing education systems without serious disruption to the scope and the support services of the program.

How can this situation be avoided? I have a number of suggestions, some better than others, some more practical than others, with the better and the more practical not necessarily coincident. In order to prevent unwarranted program duplication, Bill 30 must contain mandatory provision for consultation, co-ordination, and possibly co-management. Some mechanisms for this include:

(a) *School board continuing education advisory committees.* The Ottawa Board has had such a committee in place for five years. It acts as a watchdog and as an advisor on matters affecting the education of adults; it has the ear of the Board as it is a creature of the Board, with some trustees included in the committee membership. The committee speaks for continuing education, advocates for adult learners, and promotes cooperation among the coterminous and adjacent boards.

(b) *Regional advisory committees.* Several programs with a limited population base

are already protected and guided by inter-board cooperation in the Ottawa-Carleton region. There is a joint committee implementing the provisions of Bill 82 for trainable retarded pupils. Cooperative education also began in an inter-board mode, sharing a common employer database which all boards support monetarily. Programs in the performing arts are accessible to all of the region's students. A motion asking that a four-board regional advisory committee on continuing education be set up is before all area boards at this time, and it would, if put in place, perform the same guiding and advocacy function for adult learners in the region as the Ottawa Board's committee does in Ottawa. A regional committee could better coordinate efforts (including the sharing of facilities) across boards, and include representation from the community.

It might be suggested that enlightened school boards will cooperate to maintain, or even expand, programs for adults. In the real world, this is unlikely to happen, especially with the strains and pressures that Bill 30 will impose on the "regular" systems; hence my emphasis on the mandating of such advisory committees.

(c) *Inter-board trustee committees.* This would be a variation on the regional committee idea in that only elected trustees would sit on it, and so it would have more of a governing than an advisory status. Again, its purpose would be to advocate on behalf of adult learners and to ensure a delivery of service in the inter-board area.

(d) *Amalgamated or umbrella regional school boards.* This is a proposal which the Ottawa Board favors for Ottawa-Carleton but which has received a cool reception from other area boards. The proposal envisages one school board which runs public, separate, private, and adult schools within its district. Such a board would take into account all of the educational facilities, and all the needs to be met, and would make decisions that would be binding for all participants. This would guarantee a

minimum level of duplication and a maximum level of service and cost efficiency.

(e) *Co-management of continuing education.* Continuing education, under this concept, would be assigned jointly to coterminous, and in some cases, adjacent school boards. The mandatory aspect to the sharing and coordinating of education for adults would come through a system of special allowances or weighting factors. There must be penalties for acts of non-compliance which place programs in jeopardy. As an example, the Ottawa Board right now is attempting to consolidate programs in a declining enrolment situation by closing a number of high schools. It proposes to assign one of these to the Continuing Education adult day school. There is debate as to who, under Bill 30, has priority for a building—the separate school board or the Ottawa Board's own continuing education students.

Right of Access

Right of access is a fourth concern. In the Association's of Large School Boards of Ontario September 1985 brief to the Social Development Committee, it was predicted that under Bill 30 there would be a transfer of assessment from the public to the separate boards of \$44 billion, with a direct loss in revenue to the public boards of some \$25 million. The average public board in the province will have its tax base reduced by 15 percent in this scenario, and savings resulting from a transfer of students will be nowhere near this amount. Where will this shortfall be made up? In interim provincial funding to cushion the transfer? In an increase in secondary taxes (estimated at 6.6 percent in Metro, 9.0 percent in Ottawa, and 12.7 percent in Carleton)? This latter does not take into account some inevitable shortfall at the elementary level. Or perhaps the shortfall will be made up in belt-tightening? And where can you tighten the belt in today's school board budgets? There is not much flexibility, so I would predict a reduction in service in optional programs. Recall the ambiguity surrounding the rights of adults to continuing education (which is an optional program).

Once funding is extended, public school

boards will receive no local taxes from separate school supporters who may wish to take adult basic and secondary education courses from the public boards. Since the cost of these continuing education courses, at least in most urban areas, is not fully covered by the provincial grants assigned to them, the local public school supporter subsidizes these courses. Will the local public school supporter be willing to underwrite some of the costs of the continuing education of separate school supporters after Bill 30 goes through? A fair system of financial support for adult continuing education must be found. Again, some suggestions:

(a) *Change the regulations to allow fees to be charged to individuals taking funded adult basic and secondary courses.* Of course, almost any fees for literacy and high school courses, especially for daytime students, would be counterproductive—fees are prohibitive for many of the people most needing academic upgrading.

(b) *Change the regulations to allow splitting of assessment between separate and public boards by continuing education users.* This is an accountant's nightmare and is discouraged by any of the financial officers I have spoken to.

(c) *Require a purchase of service agreement or other transfer of funds between boards for adult continuing education.* For example, where an adult day or evening class operated by a school board enrolls a

proportion of students whose taxes support the separate board, the "sending" board pays an equivalent proportion of the cost of operating the class. (It would also work in reverse if the public board were the sending board, with an annual settling of accounts between the boards.) However, since this involves "pay without say," it would probably encourage potential sending boards to operate (or try to start) their own classes. To make this proposal work, therefore, the province could designate one board as the regional provider.

(d) *Have a pooled assessment for continuing education purposes.* I have been assured that this is technically very difficult and that, under the model of pooled assessment, many public boards will lose a substantial proportion of their tax base.

(e) *Have continuing education funded completely by the province.* One way is to modify the grant formula so that costs (including overhead) can be recovered fully by the boards. Another way might be to fund it directly and uniformly across the province, regardless of a board's rate of grant as is already done for the Heritage Language program. Either proposal avoids the public versus separate school supporter (or access) problem, since everyone enrolling is fully funded, but neither helps with the market fragmentation problem.

(f) *Introduce a voucher system for adult education.* This is a variation of the previous suggestion. Assuming an adult's

right to an adult education (i.e., to an adult learning environment), a voucher system would allow adults resident anywhere in Ontario to take their schooling wherever a viable program exists.

And finally, I come back to a suggestion made to alleviate the fragmentation problem:

(g) *Co-manage adult continuing education programs where numbers limit the number of viable programs possible.* This would be practical, I think, only where there is sufficient incentive for boards to co-operate. And the only sufficient incentive I can contemplate is legislation making it mandatory. As approved by the province, boards would contract to jointly offer continuing education programs, agree to a management arrangement, and equitably share the revenues and costs. Under this arrangement, responsibility and authority are shared, as well as costs.

In Summation

If nothing is done, if Bill 30 is not amended to address these concerns, if there are no agreements or mechanisms to ensure the survival of continuing education under boards of education, then the Planning and Implementation Commission must at least provide guidelines for an orderly interim period for the phasing in of extension in order to allow both systems time to adjust, and to ensure that any new programs will not jeopardize existing ones to the detriment of the students. This is only fair and reasonable as a minimum. But arrangements beyond this status quo are urgently needed.

Adult continuing education in many school districts is a specialized program with a limited population base. It is my conviction that the adult's right to an adult education through the secondary level must be mandated through amended legislation. Mechanisms must also be established to ensure that adults can gather in sufficient numbers so that viable programs can be held, without the artificial barrier of geographic jurisdiction or the red tape of funding technicalities. These can be overcome by reasonable people reasoning together.

From the suggestions outlined above, I propose that the most practical way to ensure relevant and appropriate adult education programs is mandatory co-management by coterminous and adjacent boards, with the boards receiving guidance and advice from mandatory inter-board continuing education advisory committees. This model can be used to ensure the availability of any specialized program for which there is a small student population, including special education, technical or commercial education, and performing and visual arts—namely, mandated co-management (the boards must jointly sponsor and run the program) and mandated advisory committees (to be aware of needs, to advocate on behalf of the students, and to monitor the delivery of service). □

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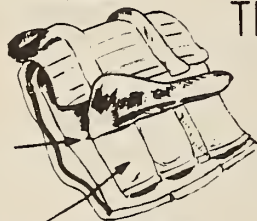
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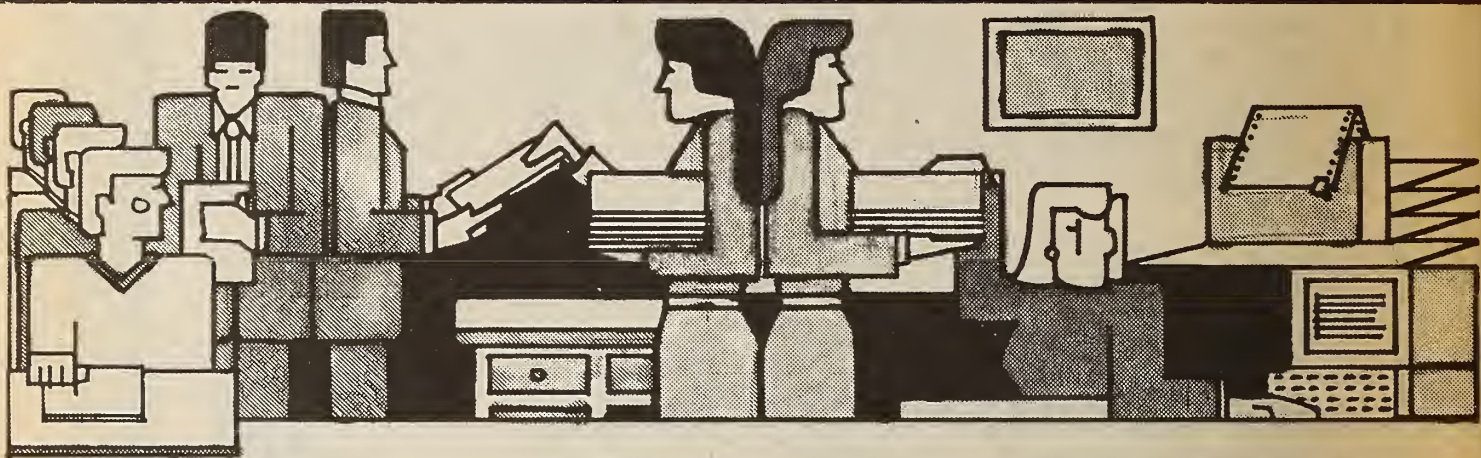
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Laura S. Weintraub

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has its own file,
and these files are
all alphabetically
arranged, and every
letter has its own
filing cabinet.
So a careful search
is made . . .

I. L. Peretz,
"Ne'ilah in Gehenna"

*An earlier version of this article
was published in the "Canadian School
Executive", Vol. 3, No. 10, 1984.*

*Laura Weintraub is currently completing her
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social policy.*

The teacher who completes the daily attendance sheet, the school secretary who collates and enters the "data" into registers or computers, the programmer who's ensured that the computer will collect and sift attendance and enrolment figures, the attendance counsellor, truant officer, or principal who acts or fails to act on the print-out's information, the administrators and planners who review, revise, and plan school programs using system-wide aggregate attendance data, all have two things in common. First, each is a representative of society's vested interests in education. Second, each is in a position to subvert those interests.

In reflecting the tensions of our wider society, many writers, not insensible to the control functions of the state's institutions, nor to the broadest implications and dangers of that control, have expressed concern, even terror, about the amassing of files on individuals, the manipulation of personal information, and thereby the power of the state over the individual. Dickens, Dostoevsky, Kafka, Solzhenitsyn, Kís and Böhl are but a handful of the novelists quite logically terrified.

Norman Mailer touched on the subject when he wrote *The Naked and The Dead* over three decades ago. He doesn't convey a Kafka-esque terror, but raises, among others, a concern often voiced by educators: the utility of information management systems. While the processing of data in the steamy jungles of the Orient during World War II is not exactly analogous to education politics (except, perhaps, in British Columbia), it is worthy of con-

sideration. In one scene in the novel, a high-ranking army man instructs his subordinate, Hearn, in the niceties of record-keeping:

If you get the cobwebs off your brain, you'll know that this is a Combat Report, so after you mark it in the journal and on the map, you put it in the file for my Periodic Report, and when I'm done with it, which'll be tomorrow, you empty the file of the previous day, and put it in the Historical File, and you have one of the clerks make a copy and put it in the Journal File. Nothing too hard about that for a man with a college education, is there Hearn?

Hearn, with a shrug, responds: "Since the report doesn't say anything, why go to all that bother?"

What do our student reports and files say, and why do we bother? Presumably, we develop sophisticated and elaborate information management systems to make sure that kids learn. While myriad uses are made of such records, from provincial grant allocations to classroom assignments, the uses all flow from one legitimating principle, specified in Ontario's *Education Act*: "for the improvement of instruction of the pupil" (Section 237).² And, increasingly in Canadian education, the words *accountability*, *legal advice*, *school board solicitor*, and *court interpretation* are emerging to formulate judgments about whether or not these kids are learning, a question that also increasingly underlines the significance of pupil records.

The Principle of Natural Justice

If literature reflects societal concerns that educators must grapple with, so too does the system of law that bounds our actions, a system founded on the liberal ethos of

balancing the conflicting tensions between the individual and the state. In education, for example, those tensions are expressed by the student's rights to privacy and confidentiality, on the one hand, versus the efficacy of computer systems to track attendance, or assessments, or family histories, on the other. Thus, within our legal framework, the question is: How do we balance the individual's allegedly inviolable integrity against the nation-state's allegedly legitimate functions?³

"Job control language" and other technical security arrangements are an insufficient though common response to the question.

Our system of law is constructed to protect individuals from the state's potential for skewed or arbitrary power through the fundamental principles of "natural justice," an administrative legal concept that many of us, muttering over our breakfast newspapers, lament is not rigorously adhered to in all court rulings. The relationship of common law and common sense is not always readily apparent.

Nonetheless, if we focus on the concept, the principle, the theory of natural justice, we can identify several mechanisms that attempt to ensure "fair play." If, for example, we are directly affected by a judicial or quasi-judicial proceeding—a trial, a tribunal, a hearing, an appeal—we

to those reasons. One of the occupational obligations of educators and educational administrators is to consider,⁴ integrate,⁵ and protect⁶ the principle of natural justice.

These are not esoteric concerns. The adolescents who fill our high school classrooms are well aware of the state's presence: witness punk rock group names such as The Government, The Police, The Clash, musical groups whose lyrics debate the role of the state, of the school, as well as the function of informational technology and its pervasive uses in the institutional exercise of state authority. While it's a relief to note that few educators wear safety pins in their ear lobes, or studded dog collars at their throats, it would also be a relief if we first debated the purpose of student records and information management in our schools, and then selected the "hardware," the "software," the "systems" to support our purposes.

Why We Fail to Address the Issues

There are, perhaps, two types of explanations that can help us understand why we routinely fail to address issues relevant to record-keeping. The first is that educators are busy, and in fact inundated with urgent demands and ever-shifting priorities that distract from the apparent luxury of philosophical debate. In Ontario,

management may be seen as benign neglect.

The second explanation, however, is not as benign, either in its origins or in its impact. Along with the historical professionalization of education and educational administration, we have emphasized the notion of "system," increasingly abstracted from a peopled world. The professional educator is an expert, routinely charged with authoritative and sometimes authoritarian decision-making at the classroom, school and board level, but is rarely also charged with the requirement to fully examine the long-term effects of those everyday decisions on the vast number of children who keep us employed.

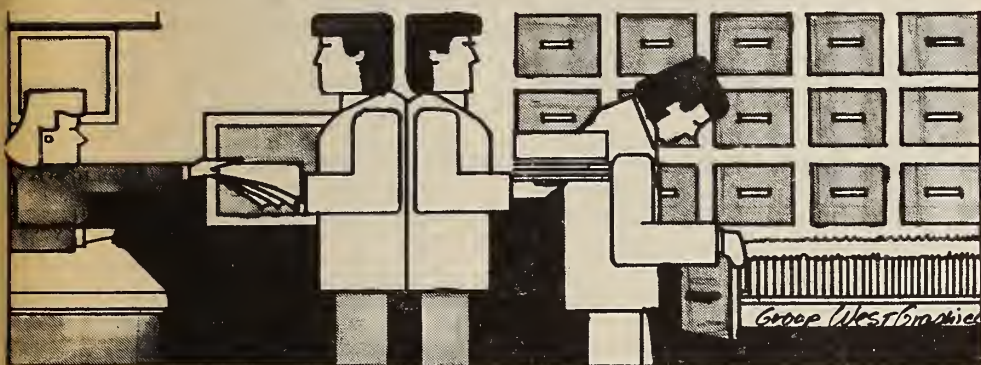
The irritated dismissal of student records as annoying paperwork, the pejorative castigations of civil libertarian privacy concerns, the proliferation of unofficial, unregulated, and unprotected files, and the resentment and even blockage of student and parent/guardian rights to access and to correct or comment on those records are symptomatic of education's tradition that the system and its experts must proceed with their business unhindered. But if our business includes the individual child, it must also include an awareness of that child within the wider social context. Student records, universally required for each pupil entering school, have a profound effect on that context. Our neglect of the tensions between the individual and the state is not, then, benign.

But given the inordinate demands placed on school boards, too often assigned the great band-aid role for all social ills besetting our children, how can we also accommodate the ethical and legal considerations affecting record-keeping? There are five steps to safeguard against subversive actions. The first, and most difficult, is that we define the purpose of our student record-keeping system, ensuring that all relevant—and no irrelevant—information is gathered, so that the right information gets to the right people at the right time for the right reasons. The formulation of purpose, the consideration of relevant or irrelevant information, and determinations of "right" people and reasons will necessarily entail reflection on both the purpose of schooling and its wider relationship to natural justice concepts.

The remaining guidelines are more specific. They relate to keeping information management legally and ethically based. If philosophy and justice are notions that don't hold intrinsic fascination, the four criteria may be of interest in any case since they might save the education systems hefty legal costs, especially in view of the Charter of Rights and Freedoms, the *Young Offenders Act*, and Ontario's proposed *Freedom of Information and Protection of Individual Privacy Act*.⁷ The key concepts are: Consent, Access, Security, and Informing.

Consent

To be operationally, ethically, and legally



are entitled to be informed of the proceedings, and to be informed well in advance, so that we can attend, and can prepare for our attendance. We're also entitled to legal representation at many of these proceedings, originating in the notion that if I am an inarticulate, illiterate, and powerless goatherd, I can gain assistance in defending myself before educated, literate, articulate, and powerful non-peers.

Natural justice means that those involved can participate in and respond to the proceedings. The state, the school board, and the special education placement committee do not have a monopoly on discussion at those proceedings. If witnesses are to be called and cross-examined, formally or informally, all parties have the right to call and question relevant witnesses. Natural justice means that ALL documents, files, records, and notes that will influence a judicial or quasi-judicial decision will be provided to ALL parties. And finally, natural justice means that reasons for decisions are given, and that all principal parties are provided with access

school board politicians, administrators, and employees are facing: full implementation of mandatory special education legislation; compulsory early identification for our entire school population; new race relations and affirmative action policies; efforts to stem the erosion of services in our rural, isolated, and northern areas while enrolments and resource bases shrink; new definitions of truancy and juvenile delinquency through the *Young Offenders Act*, a federal law that increasingly affects schools (and their record-keeping duties); intensifying concern about the physical integrity of our students, with regard to child abuse and sexual assault; the major school funding and separate/public school divide; the heritage and French/English language debates; the intensifying examination of the trustee role; and the recent reorganization of our secondary school programs. Each of these issues rightly commands focussed attention, and the agenda is further complicated at local levels by local concerns. In this regard, then, educators' neglect of the principles of information

valid, consent to collect, store, and disseminate information must be granted by parents/guardians and/or pupils freely, with foreknowledge of the options and consequences of saying "yes" or "no." The consent must be situation-specific and time-limited, unless of course an act of law or its equivalent has already provided specific consent mandates and mechanisms. Consent is not a signature on a piece of paper.⁸ Valid consent is a fully informed "act of the will." Does your school board have and use mechanisms for ensuring that you're permitted to collect, store, and distribute specific types of student information? Or is your system subversive?

Access

Who does and doesn't have access to student information? In Ontario, in addition to supervisory officers, the principal and teachers, parents/guardians, and students are entitled by law (*Education Act*, Section 237) to pupil-record access. Nonetheless, those so entitled often have difficulty getting full information, or obtaining it without encountering undue delay, multidisciplinary roadblocking, or multiple file systems that keep the "juicy stuff" tucked away in "non-files," while the official student record remains slim, clean, and bland. The side-stepping of the principle of access, or the casual non-protection of confidential information that ought not to be transmitted, is common across Canada,⁹ and subversive.

Security

Has your board ensured that meticulous systems are in place to safeguard each and every file, paper-based or electronic, official or "non-existent"? If we have an obligation to collect student data in order to educate our pupils, we also have an obligation, equally onerous, to protect it from accidental or malicious loss, theft, fire, tampering, and mis-use. How does your board and its security system minimize risk, maximize recovery possibilities? Has your board delegated the critical responsibility for ensuring the legal and ethical maintenance of record systems to a senior administrator—or has your board paved the way for subversion?

Informing

The individual's rights to privacy and confidentiality are eradicated unless we have systematic and effective ways of informing people of their rights. Does your board offer a number of mechanisms for keeping parents and students abreast of what's collected, what's protected, and who can see what? In the past, one of our best kept state secrets has been that students and parents/guardians have legal access to the pupil records. Ontario has certainly offered progressive leadership in this area at a policy level. But policy is merely the first step in protecting the fragile balances between the state's right to know and the individual's right to privacy, between the educator's need for pupil information and the individual's and family's confidentiality rights, between the

individual's need for education and individual integrity. Does your board provide full information, systematically and in a variety of ways, about files and about rights? Or is your board subversive?

Consent, access, security, and informing: they all connect our schools' administrative and information systems to the concept of natural justice, a critical connection because of the education system's ties to both the individual and the state. We have powerful technologies at our disposal. To use them well we must give careful thought to the purpose and function of student data and to the legitimate and delicate role that educators play as one of the brokers between the individual and the state. We may find echoes of our failure or our success in the music, the literature, the art, and the polity soon to be generated by the children now in our care.

Reference Notes

1. The nature and scope of educators' concerns about student records are discussed in *The Ontario Student Record and the Record-Keeping Ramifications of Bill 82* by E.H. Humphreys et al. (Toronto: Ontario Ministry of Education, 1986).
2. For an elaboration of legislative and interpretive considerations, see *Legal Aspects of Student Information in Ontario* by E.H. Humphreys and L.S. Weintraub, Report No. 2 of "The Adequacy of the OSR" Project (Toronto: Ontario Ministry of Education, 1983).
3. The scope of this article precludes discussion of the wider philosophical debate on the origins, alleged objectives, ideological bases, and actual functions of the legal system in the liberal state.
4. See R. Magsino, "Rights in Canadian Education," *Canadian Society for the Study of Education Yearbook*, 1982.
5. See J.A.C. Smith, "The Right to an Appropriate Education: A Comparative Study," *Ottawa Law Review*, 12, 1980, p. 367.
6. For an interesting analogous discussion, see M. A. Somerville, *Consent to Medical Care* (Ottawa: Law Reform Commission of Canada, 1979); see also R. K. Yoshida and J. Gottlieb, "A Model of Parental Participation in the Pupil Planning Process," *Mental Retardation*, 15, 1977, p. 17.
7. The proposed legislation is currently referred to as Bill 34, and its anticipated impact on the education sector will be the subject of a forthcoming *Orbit* article.
8. The consent issue is frequently misunderstood in education. For an elaboration of the concept, see H. M. Kelly, "Consent Forms," Paper presented at the Third Annual Conference of the Canadian Institute of Law and Medicine (Toronto, 1981).
9. For a succinct cross-Canada survey, see *Privacy in Jeopardy: Student Records in Canada* by E. H. Humphreys (Toronto: OISE Press, 1980).

INNOVATIVE COURSES TO CHALLENGE RUSSIAN

Rosemary B. Ganley

The teacher of literature works to foster compassion and human understanding among her students. Literature, by its nature, describes human predicaments and engages readers to walk in the footsteps of the characters, feeling their feelings and seeing the world through their eyes.

With this main goal in mind, and mulling over the dominant predicaments for the human enterprise in 1986, I came to believe that my work as a literature teacher should focus more directly on creating a challenge to the Cold War mentality that pervades our culture like a sullen black cloud. I would expose high school-age students to Russian literature and monitor the results, especially in their attitudes.

The Cold War mentality, rigid, unreflective, and dangerously righteous, was noticed by Rev. Bruce McLeod in a recent *Toronto Star* article reporting a conversation he had with a Canadian ten-year-old. "What do you think Soviet children are like?" he asked. "Mean," was her instant reply. My students, given the same query, wrote: "Russians are basically untrustworthy. They are aggressive and quite backward. I think they want to rule the world."

The revelation of such bias and arrogance was initially shocking. It seemed that the values of the film *Rocky IV* were ascendant among youth. But wait a minute. Youth also have highly developed critical faculties in some matters, as any adult knows, and these talents might be trained on their own inherited wisdom, if they could see another perspective and trace the acquisition of their views. The question that interested me then was: Could a short course in Russian studies, based mainly on literature but not excluding any topic students found worthy to investigate, modify their low regard for Soviet culture and achievement, and help forge an emotional bond between them and Russian

Rosemary Ganley has been recently appointed Head of English at St. Peter's High School, Peterborough. She taught the course described in this article at Lakeland College School last winter.

While teaching in Jamaica and Tanzania in the '70s, Ganley studied the literature of the regions, and has designed and taught Third World writing in high school.

Her interest is in cross-cultural understanding through literature. She was selected Woman of the Year in Peterborough in 1985.

THE COLD WAR MENTALITY: STUDIES IN HIGH SCHOOL

people as human beings who share planet earth?

If students could emerge with a new awareness of the values that are hidden in language, that would be a bonus. For, as McLeod had wittily pointed out, what is our "government" is their "regime"; what is our "information program" is their "propaganda."

I expected some resistance. So I armed myself (bad choice of words) with the remark of eminent literary critic Edmund Wilson: "The three greatest literatures in the world are English, Greek and Russian."

However, the notion of Soviet studies met with approval. Colleagues all had their favorites: Tolstoi, Pushkin, Chekhov, Turgenev. And suggestions. Did I realize that Gogol's "The Government Inspector" was playing at Stratford? Why not take the kids to see "White Nights" and top it off with dinner and Cossack dancing at the Ukrainian Caravan in Etobicoke? A parent called to say he knew a Soviet diplomat who would come to class. Another parent offered to give a lesson on the Cyrillic alphabet. Students were quick to point out that they knew these letters from the backs of hockey sweaters. The peace group in our community was staging a film festival entitled "Russia: Northern Neighbour."

It seemed to be an idea whose time had come. We were able to do all the activities and, in addition, hear a scintillating lecture by M.I.T. linguist and social critic Noam Chomsky, who visited Peterborough. After hearing his analysis, one cannot look at American foreign policy in the old naive way again.

Of course, many splendid works of literature could not be included for reasons of time and accessibility. We selected the powerful 19th-century novel, *The Brothers Karamazov*, by Dostoevsky, and plunged into his world of guilt and innocence, holiness and evil. Russia's throbbing religious past came as a surprise to the students. They have been steeped in the idea that Russia has always been monolithically atheistic. When their curiosity was aroused by Zossima about the monastic life, several students made a visit to a monastery for women in our area.

I was told by an English teacher of a brilliant and little-known Russian novel called *We*, by Yevgeny Zamiatin. It was written in the twenties as a critique of Stalinism and is the forerunner of other anti-Utopian novels like *1984* and *Brave New World*. My goal was to show students that among the most passionate voices of dissent against totalitarianism are the

voices of Soviet writers: the Pasternaks, Solzhenitsyns, and Zamiatins. I hoped the students would come to admire their courage, imagination, intelligence, and at the same time their Russianness. I also hoped that students would begin to discern the totalitarianism in our own consumerist society, to see the traces of "Stalin in the soul" which marks popular culture in the West.

Good luck followed our course. While browsing in the Bob Miller Book Room on Bloor Street, I came upon a slim and timely volume, *Russian Poetry*, collected and translated by poet-ambassador R.A.D. Ford, who was Canada's envoy to Moscow for 16 years. Mr. Ford wrote to the class from this retirement in France: "I would like to come to see you and talk to the students about Russian poetry and the Russian poets I knew. But I am too far away. For me, Pasternak and his contemporary, Voznesensky, are two of the best poets in any language in our epoch."

The poems which Mr. Ford introduced to us in his book were successful with the students. Their themes were mostly landscape, growing up, and young love. The work of the popular poet Yevgeny Yevtushenko was prominent. He is becoming more openly political and critical of repression in his country.

"Sovlit," as the course came to be known, turned to student presentations. There were seminars on composer Sergei Rachmaninoff, film director Sergei Eisenstein, artist Marc Chagall, and goaltender Vladislav Tretiak. Two boys performed a skit showing total incomprehension between an American traveller and a Russian shopkeeper. Another boy sang his own peace song, one full of longing and startling images. Both the positive and the negative sides of life for Soviet women were presented.

There were more good resources than time to examine them. In video, the class saw *Zakharov*, with the remarkable Glenda Jackson as Yelena Bonner, and *Reds*, the film about journalist John Reed during the October Revolution of 1917. Humor must be part of any serious course, and Alan Arkin's *The Russians Are Coming: The Russians Are Coming!* hasn't dated a bit. *Doctor Zhivago* portrays with faithful beauty the dilemma of the Russian physician torn from personal happiness by public events.

Issues of war and peace are inevitable in such a course. There is a deep adolescent rage and frustration about the arms race, its threat to their future, and its sapping of resources. Providing a forum for unleashing

these feelings was also an important objective. I thought that, to some degree, a sense of hopefulness was engendered. The class seemed to experience the human face of "the enemy," and to have a measure of identification. Toward the end of the course, students were asked to express what they had learned. They said:

There's a great deal of propaganda floating around our society. Rocky IV is packed with pro-American stuff. And in wrestling, the evil Nikolai Volkov is beaten by Hulk Hogan, and the Russian flag is spat upon; the crowds cheer. We must be as brainwashed as the Soviets.

The documentaries by Gwynne Dyer really affected me. He cares about the fate of the earth, and he sure makes war for any reason against anyone look ridiculous.

My favorite poem was "Blue Mist" by Esenin.

The Russian Studies course broke the ignorance barrier, and this is a step in the right direction. I learned a lot about my class. The friends I've lived with for four years have different ideas than mine. Sometimes I got very angry.

I think we spend too much time on nuclear stuff. One day, you remember, I just got up and walked out.

If we could penetrate each other's propaganda, I bet we could sit down together and laugh about each other's leaders over a bottle of vodka and a few beers.

I learn best when I am having fun. This was fun and different.

My father fled Hungary after the 1956 invasion of his homeland by the Russians. Yet he never let his animosity show. This course has enabled me to understand the protective paranoia they feel for their land.

My outlook is broader and I don't feel such fear as before.

It was my feeling that the course had integrated cognition, affect, and attitude to a greater degree than I had previously known. It was a useful course in the sense of suggesting a different vision, to be worked out by people who are imaginative and self-critical. Such people poet Wendell Berry describes as "free of weapons and official hates." He continues in his poem *To a Siberian Woodsman*:

Who has invented our enmity?

Who has prescribed us hatred of each other?

If, as I believe, the Cold War mentality is centrally that of a failed imagination, we English teachers have a special and unique responsibility to the young and their world. □

Self-Directed Learning Is Alive and Well at the University of Waterloo

Howard Woodhouse

Self-directed learning is an idea born of educational romanticism, popular during the 1960s, that is supposed to have died then and there. This widely accepted belief is not entirely accurate. At the elementary and high school levels, the "free" schools of the 1960s became the "alternative" schools of the 1970s and '80s, stressing the themes of community, individualized programming, experimental learning, and egalitarian relationships among staff, students, and parents. There are 21 such schools alive and well in Toronto, as well as many others scattered throughout Ontario and the other provinces. At the college level, The New School at Dawson College in Montreal is a program committed to individualized learning of an interdisciplinary nature that has been running successfully for more than ten years.

Canadian universities, on the other hand, have proven relatively slow to adopt independent study programs. There are now Interdisciplinary Programs at York, McMaster, Guelph, and Waterloo but only at the latter is education based on self-directed learning. In the United States, however, Empire State College in New York State operates an Independent Study Program that is founded on a one-to-one tutorial system. The University of Minnesota has operated a "University Without Walls" program for many years in which undergraduates pursue independent learning, and Antioch College in Ohio State continues to offer cooperative programs in all fields, thereby emphasizing the relationship between study and social reality. In Britain, the Oxbridge tutorial system has encouraged independent study throughout its history, as has the Open University which has successfully offered multimedia courses, primarily to adult learners, for some 20 years. Not surprisingly, one of the most innovative programs is based at a polytechnic. The School for Independent Study at North East London Polytechnic started in 1976 as an undergraduate course of study in which students plan their own programs using the varied expertise of the Polytechnic's staff. The school has an enrolment of 100, publishes an International Newsletter of Independent Study, and started a graduate program in 1984, based on the same principles.

Independent Studies (I.S.) at the University of Waterloo is a self-directed learning program unique in Canada. It began in 1969

and has continued to produce graduates entering all walks of life, from medicine to film production, midwifery to economic planning. The program, which has consistently enjoyed the support of the senate and the administration, combines the experimental and the innovative with the practical and the downright excellent.

There are currently about 60 students enrolled in I.S. During its 17-year history, 186 students have graduated from the program with a Bachelor of Independent Studies (B.I.S.) degree. According to the written testimony of many of these, I.S. provided an educational environment that catered to their individual needs, making learning an enjoyable process and developing skills appropriate to the workplace: independent thought, problem-solving, communication, and leadership. Originally, there was also a non-degree stream within the program, in which students could pursue their own studies regardless of whether they intended to graduate. When the program was reorganized in 1985, this stream was dropped, to the regret of many students, who saw it as a unique opportunity to pursue their interests with no external pressure whatsoever.

Students may enter the program directly from high school, from other university or college programs, or as mature students. Some students come to I.S. with work experience, desiring two or three years off in order to strengthen their academic or job-related skills. Others continue working part-time while they study. The program has proven flexible enough to accommodate all-comers, including full-time students. Students graduate, not by accumulating course credits but by writing an undergraduate project or thesis that is supervised by two faculty members outside the program. Students can obtain guidance in this process and in their pre-thesis studies from any of the academic staff within the program. Examples of current areas of interest include artificial intelligence, women's health, medieval architecture, and alternative energy. The calibre of the projects is unusually high. Some are of post-graduate quality.

In addition to the academic director, who is Dr. Anne Innis Dagg, a biologist and writer of some repute, there are five academic staff. Their interests include the fields of communications, history, philosophy, political science, and psychol-

ogy. Each encourages interdisciplinary approaches in his/her seminars and tutorials and is vitally interested in related fields of study.

In order to understand the success and longevity of I.S., it's helpful to look at its history and philosophy, as well as its institutional setting.

History and Philosophy

Founding Ideas—I.S. grew out of discussions at the University of Waterloo in the mid to late 1960s concerning the nature and purpose of learning. Three main issues emerged: first, that course credit and grading systems might actively prevent learning in some students; second, that learning could be facilitated in small groups of students and faculty, working together as colleagues; third, that an integrated approach to knowledge was needed that would link different disciplines and develop diligent generalists. These ideas still constitute the core of I.S. and link the program to current educational debate in the university as a whole.

Founding Members—In the fall of 1969, I.S. was established with a view to implementing its three central features. Not surprisingly, the program initially attracted those students who were most vocal in their opposition to the educational and political establishment: free schoolers and deschoolers, feminists and pacifists of Theodor Roszak's "counter culture." These people became the founding members of I.S. and gave the program much of its momentum and flavor for the next several years.

Ongoing Constituency—I.S. today still attracts those students who enjoy learning in self-directed ways, as well as those who question society's dominant ethic both intellectually and existentially. There is, however, as there always has been in I.S., another category of student which can be regarded as "entrepreneurial." These students wish to make use of the openness and flexibility of I.S. to sharpen up their intellectual skills for the battles of the marketplace. One of our first graduates, for example, is currently running a highly successful wool farm in Southern Ontario. Two of our graduates work for investment and financial companies in Ontario and New York State, while another is Canadian Sales Manager for a microcomputer firm. Another of our graduates is Managing Editor of *Quill and Quire*, while yet another is Deputy Director of the International Institute of Communications, a non-profit international organization in communications research policy and analysis, based in London, England. Six other graduates have attended or are attending McMaster University Medical School, renowned for its innovative teaching methods, and one of these is now a Clinical and Research Fellow at the Hospital

Dr. Woodhouse is an educational consultant who is an Academic Advisor in Independent Studies, University of Waterloo. A graduate of OISE's History and Philosophy Department, he has taught at both Canadian and African universities.

for Sick Children in Toronto. We have a graduate who is Academic Coordinator for a women's training program affiliated with George Brown College and another who is Director of Policy for Premier David Peterson. I.S. has been able to accommodate vastly different types of students within its coherent community.

Government—The idea of self-government has also provided a central thrust to the history of I.S. The program has been run, in turn, by one of three systems: a general assembly or council, a management or executive committee, or a combination of both. At present, both the Academic Director and the Executive Committee, with two members elected by students and two Academic Advisors, make decisions and determine policy after full consultation with I.S. Council which includes all members of the program.

The idea of a council, at which all members, including students, faculty, and staff, have a vote is not new. It was successfully implemented at A. S. Neill's Summerhill and at Bertrand and Dora Russell's Beacon Hill School, for example. More recently, certain OISE departments, including History and Philosophy and Sociology, have had assemblies to determine policy, at which all members are eligible to vote. None of these experiments



in self-government has catered to undergraduates, however.

At the regular meetings of I.S. Council, students and staff raise their concerns about matters academic, administrative and social. After further discussion in the appropriate committees, on which students also serve, a consensus is usually achieved. Council serves as a focus for educational debate, a first-hand introduction to shared decision-making and an opportunity for members of the program to come to know one another. Indeed, it is primarily by means of Council that students develop a sense of community and belonging which is unusual in the modern university.

Institutional Setting

The University of Waterloo is renowned as

a "high-tech" university: its Faculty of Mathematics, for example, is the largest and finest in Canada and its new Institute for Computer Research will act as a bulwark to its excellent Computer Science Department. Why is it, then, that the university has been so active in its support for I.S.? First, the university itself was born in 1959 and has managed to sustain its youth and vigor, largely through a decentralized decision-making process, often absent from older institutions. Second, the university has supported an unusual number of innovative programs, including the Cooperative Program, Environmental Studies, Women's Studies, Canadian Studies, Gerontology, that, like I.S., have catered to the interests of the more unusual, unorthodox learner. Third, physicist Dr. Tom Brzustowski, the Vice-President Academic, well understands the worth of the program in preparing students for life in a rapidly changing society in which narrowly trained experts are many but broadly educated human beings too few in number. It is partly to the latter to whom I.S. appeals in its educational mission.

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BOOK REVIEW

Reviewed by Mary J. Wright, Dept. of Psychology, University of Western Ontario

Responding to Individual Needs: A Guide for Teachers by Peter J. Gamlin and D. Russell Fleming. Toronto: C. J. Hogrefe Inc., 1985

This book is for preschool and primary grade teachers. Its purpose is to help them deal with what Piaget called the problem of "the match." Taking into account both cognitive and emotional factors, it provides a framework for assessing children's readiness for meeting the academic challenges of the primary grades. Matching tasks to children's developmental levels is seen as of paramount importance if they are to "learn how to learn" or develop the motivation and cognitive styles necessary for success.

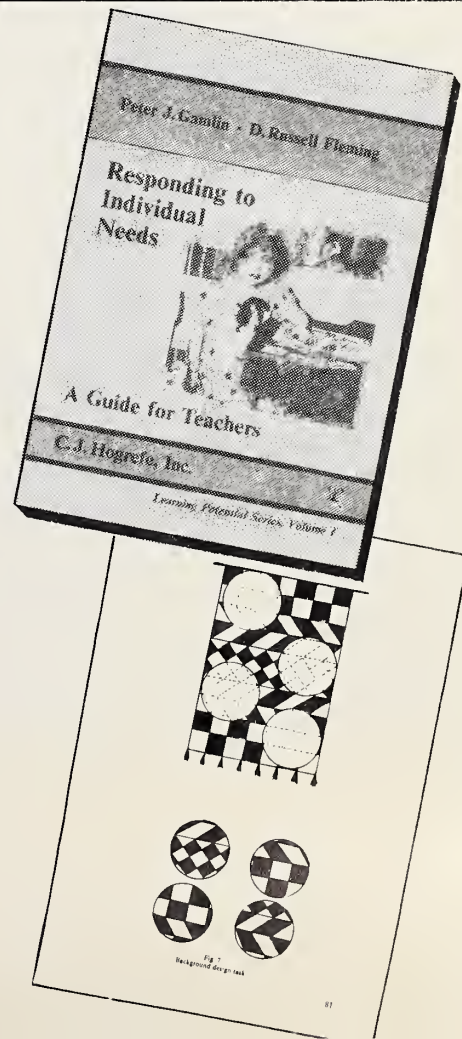
The authors point out that "marks" are not enough for assessing readiness. They provide information about what children already know, but nothing about how they think or tackle a problem. Yet success in learning depends both on children's appraisals of themselves as learners and the strategies they employ in thinking through a problem. Hence, in this book, teachers are given help in understanding both the personality variables and the thinking skills which facilitate learning in young children, how they develop, how they can be assessed, and how their growth can be fostered.

The development of thinking skills is discussed using a model called "similarity

thinking." This stresses the importance of developing the ability to recognize similarities between old and new events and to transfer knowledge and apply it in novel problem-solving situations. The development of "similarity thinking" in seven types of thinking is discussed. These are subsumed under three major headings: Convergent Thinking, including the ability to analyze and synthesize; Holistic Thinking, including the ability to form concepts and deal with analogies; Divergent Thinking, including imagination, creativity, and flexibility in the choice of means-end strategies. Tasks for assessing a child's level of development in each kind of thinking are then described.

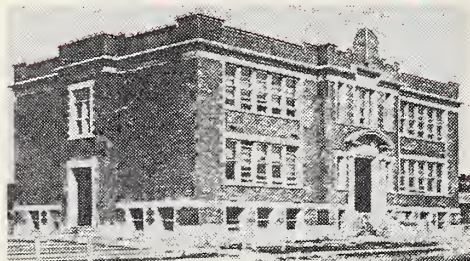
The development of attitudinal and emotional variables which affect learning are discussed with reference to the theories of E. H. Erickson and W. E. Blatz. In both theories, the need of children to develop a basic sense of trust in others and in themselves is stressed and the conditions under which this kind of trust develops are described. Suggestions for building self-confidence in children who have too little trust in their ability to learn are offered.

Teachers will find this book easy to read, for its contents are illuminated with case study material. They will be introduced to Beth Ann, Andy, Georgia and Herbert, and Josie and Richard whose behavior and thinking will no doubt be recognized as "similar" to that of their own pupils.



Profile of a School

King George Public School, North Bay



After 75 years, a school becomes more than just a building reserved for learning. It becomes a community focal point revered for its memories.

King George Public School in North Bay is one of Northern Ontario's oldest schools and is celebrating the three-quarter century mark this coming fall.

Ink wells and desks with turned-up seats in straight rows were what this school was about in 1911. You probably didn't get out of your seat. And the song to start the day was God Save the King—in honor of the reigning monarch, George V. Things have changed, or have they?

Larry Murray, principal of the school, says there is a strong commitment by his staff of 13 to adapt to the changing nature of education, but with a focus that was evident in the "good ole days." "We strive to provide a basic and sound education for our students and continue to use current approaches and ideas that will better prepare them for the years ahead."

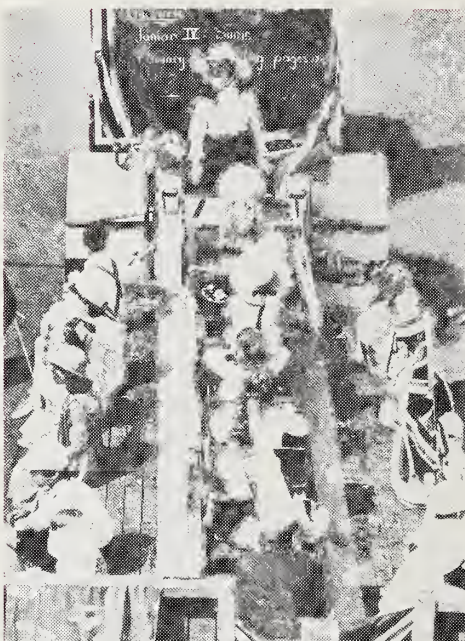
The school has changed little in appearance over the decades. The white-washed plaster walls and lofty ceilings are reminiscent of the building as it was just prior to the advent of World War I. You can hear the familiar creak of the hardwood floors.

Today at King George, there are still the classrooms and the kids (275 of them from junior kindergarten to grade 6), but there are more services to meet the extra needs of all children. Two students with the Visually Impaired program are given instruction with Braille support and are part of a regular classroom. There is also a Learning Skills class for children with special learning styles and a resource-enrichment program. As part of this



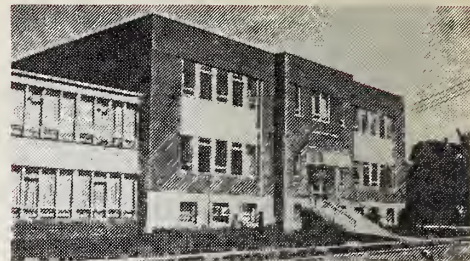
**75th ANNIVERSARY
1912-1987**

NORTH BAY'S ROYAL SCHOOL



latter program, a small group of students are on their way to Arizona to participate in an international Olympics of the Mind competition.

Because of the size of the school, it is the home



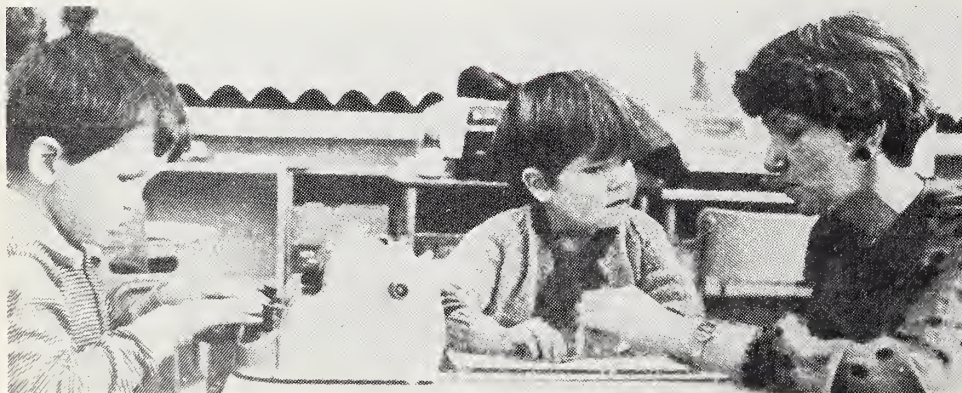
for the Nipissing Board of Education and the Nipissing Roman Catholic Separate School Board's Joint Film Library which serves more than 40 schools from kindergarten to grade 13. Also making its services available from the King George base is OISE's North-Eastern field centre.

Jane Mortson, a teacher at the school, with the help of present students, is coordinating the celebrations marking the anniversary. "Fund-raising and research are a big part of our ongoing activities," she says. "We want to create a feeling of what it was like in 1911 and in the successive years."

A walking tour around the neighborhood is being planned highlighting many of the "old" North Bay landmarks. A parade involving all the students in fashions of yesteryear and a week-long slate of activities are being finalized. And former students and teachers from across the country are being invited to help celebrate the event, September 9 to October 4.

The "Where are they now?" list for King George includes Kenneth Thomson, head of one of the largest newspaper empires, Cathy Diggles, a former Miss Canada, Mike Harris, the area's current M.P., and North Bay alderman Dr. William Keech, a former medical chief of staff and World War II veteran who participated in the famous POW "Wooden Horse" escape.

A school is a common denominator for us all. The years spent within the classroom provide thoughts for a range of emotions. King George Public School will create a feeling of belonging this fall for the many people who are part of its continuing heritage.



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